

IN THE UNITED STATES DISTRICT COURT FOR THE  
SOUTHERN DISTRICT OF WEST VIRGINIA, HUNTINGTON DIVISION  
BEFORE THE HONORABLE ROBERT C. CHAMBERS, JUDGE

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CLAUDE R. KNIGHT and CLAUDIA  
STEVENS, individually and as  
personal representatives of the  
Estate of BETTY ERLINE KNIGHT,  
deceased,

Plaintiffs,

vs.

No. 3:15-CV-06424

BOEHRINGER INGELHEIM  
PHARMACEUTICALS, INC.,

Volume 8  
Pages 1440 through 1775

Defendant.

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REPORTER'S TRANSCRIPT OF PROCEEDINGS

JURY TRIAL

TUESDAY, OCTOBER 16, 2018, 9:00 A.M.

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George Crossley - Direct (Jones)

1440

1 HUNTINGTON, WEST VIRGINIA

2 TUESDAY, OCTOBER 16, 2018, 9:08 A.M.

3 THE COURT: Good morning.

4 All right. Are we ready to proceed with the next  
5 defense witness?

6 MS. JONES: We are, Your Honor.

7 MR. CHILDERS: We still have one outstanding  
8 objection to a document that we didn't believe was timely  
9 disclosed.

10 THE COURT: Okay.

11 MS. JONES: I don't think it's going to be an  
12 issue, Your Honor.

13 THE COURT: Use the microphone.

14 MS. JONES: It's an article. The lead author is  
15 named Dr. Chan. I actually don't think it's going to be an  
16 issue. I don't currently intend to use it with him on  
17 direct examination. Depending on what they did on cross, we  
18 might have a different conversation. But for current  
19 purposes, we're fine.

20 MR. CHILDERS: Fair enough, Your Honor.

21 THE COURT: Good enough. Let's bring the jury in.

22 (Jury returned into the courtroom at 9:09 a.m.)

23 THE COURT: All right. You may be seated.

24 Good morning, ladies and gentlemen.

25 Plaintiff may call their -- or the defendant may call

George Crossley - Direct (Jones)

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1 its next witness.

2 MS. JONES: Thank you, Your Honor. The defense  
3 calls Dr. Crossley.

4 THE COURT: Doctor, if you'll step up here around  
5 this side, my clerk will swear you in and you can take the  
6 stand over here.

7 THE WITNESS: Okay.

8 **GEORGE CROSSLEY, DEFENDANT'S WITNESS, SWORN**

9 MS. JONES: Your Honor, while we're getting  
10 situated, it is it okay for me to hand out the binders of  
11 the exhibits?

12 THE COURT: Absolutely.

13 MS. JONES: May I approach the witness, Your  
14 Honor?

15 THE COURT: Yes.

16 MS. JONES: May I proceed, Your Honor?

17 THE COURT: Yes.

18 DIRECT EXAMINATION

19 BY MS. JONES:

20 Q. Good morning, Dr. Crossley.

21 A. Good morning.

22 Q. And good morning, members of the jury.

23 Dr. Crossley, could I ask you just to start by  
24 introducing yourself to the jury, please?

25 A. Yeah. My name is George Crossley. I am on the faculty

1 of Vanderbilt University. I'm a heart doctor and I  
2 specialize in taking care of people with heart rhythm  
3 problems.

4 Q. And when you say heart doctor, is that also known as  
5 being a cardiologist?

6 A. Correct.

7 Q. And are you also what's known as an  
8 electrophysiologist?

9 A. That's correct. That's the heart rhythm specialist.

10 Q. Okay. You're the -- you are our last witness in the  
11 defense case but the first cardiologist that the jury has  
12 heard from yet. Can I just ask you to generally describe  
13 what types of conditions you, you cover in your practice.

14 A. I, I take care of patients with heart problems in  
15 general but focus on patients with heart rhythm problems  
16 like atrial fibrillation and other fast and slow heart  
17 rhythm problems.

18 Q. And over the course of your, your career as a  
19 cardiologist and electrophysiologist, how many atrial  
20 fibrillation patients would you estimate you've cared for?

21 A. I couldn't possibly -- many thousands.

22 Q. Okay. And have you had experience treating atrial  
23 fibrillation patients with anticoagulant medicines?

24 A. Yes, ma'am.

25 Q. Have, have you had an opportunity to review the medical

1 records and the deposition testimony related to Mrs. Betty  
2 Knight's treatment with anticoagulant therapy?

3 A. Yes, I have.

4 Q. Let me ask you another question. As part of your  
5 practice as a cardiologist do you also regularly treat  
6 patients who have something known as coronary artery  
7 disease?

8 A. Yes.

9 Q. And just in a very brief synopsis, tell the jury what  
10 coronary artery disease is.

11 A. So coronary disease is, is the kind of problem that  
12 gives you heart attacks or angina or chest pain. It's  
13 caused by blockage in the blood vessels in the heart. The  
14 heart is fed by arteries just like any other organ is. And  
15 those blood vessels get stopped up by cholesterol and fatty  
16 material that causes blockages there.

17 Q. And have you also had experience in your practice  
18 treating patients who have had heart attacks?

19 A. Yes, certainly.

20 Q. Okay. How long have you been a cardiologist?

21 A. Since -- I finished all of my training in 1991. I did  
22 my cardiology and electrophysiology training in one, in one  
23 path.

24 Q. And, so, are you coming up on 30 years as a  
25 cardiologist?

1 A. Yes.

2 Q. Okay. I want to ask you just some basic questions  
3 about Mrs. Knight's case. And then I want to come back to  
4 talking a little bit more about your background.

5 As part of your review of the medical records and the  
6 testimony related to Mrs. Knight's care and treatment, can  
7 you tell the jury whether you formed an opinion about  
8 whether she was an appropriate patient for anticoagulant  
9 therapy?

10 A. I certainly have.

11 Q. Okay. And what is your opinion on that just briefly?

12 A. Yeah. Just briefly, I think she's certainly a  
13 candidate for anticoagulation therapy.

14 Q. And, similarly, did you form an opinion on whether  
15 Pradaxa was an appropriate treatment option for Mrs. Knight?

16 A. Indeed it was. Pradaxa and its -- the NOACs have  
17 significant advantages over the other available blood  
18 thinners for a patient like Ms. Knight who had tremendous  
19 risk of stroke.

20 Q. And when you -- you used a term that I think the jury's  
21 heard a little bit about, this term "NOACs." What are  
22 NOACs?

23 A. So NOACs are novel anticoagulants. For 100 years all  
24 we've had to treat, to treat blood clotting problems is  
25 warfarin. And warfarin is, is sort of an analog of the



1 material that's used in rat poison. It's used in a very  
2 titrated way because you have to be very careful with how  
3 you dose it. And I don't mean to suggest that it's poison  
4 because it's not.

5 But it, it, it had -- it's very difficult to control  
6 and we were, we were -- all of us that are in the world of  
7 treating people with heart rhythm problems that need blood  
8 thinners and, for that matter, the rest of cardiology with  
9 heart valve problems that need blood thinners were very  
10 excited to have these new drugs that give us better, even  
11 control of their blood-thinning over time.

12 It's much easier to get patients therapeutically  
13 controlled and keep them from going way too high and way too  
14 low on these drugs than it is on warfarin.

15 Q. And, Doctor, one final just kind of introductory  
16 question and then we'll talk a little bit more about your  
17 background.

18 Did you form an opinion based on your review of the  
19 medical records and the testimony in the case of what led to  
20 Mrs. Knight's passing in September of 2013?

21 A. I, I think it's clear that her coronary artery disease  
22 led to her death.

23 Q. Okay. Doctor, where are you from originally?

24 A. I was born in Johnson City, Tennessee, and then raised  
25 in Atlanta.

1 Q. And can you tell the jury a little bit about your  
2 educational background starting with undergraduate school  
3 and heading into becoming a cardiologist?

4 A. I started college at the University of Tennessee as a  
5 music major, and then changed to a more scientific approach  
6 and moved to -- transferred back to the University of  
7 Georgia.

8 I did my undergraduate degree and Master's Degree in  
9 microbiology there where I met my wife. It was the best  
10 thing that came, came to me out of graduate school.

11 And then I went to medical college at the Medical  
12 College of Georgia in Augusta, Georgia, and did all my  
13 post-graduate training at the University of Alabama in  
14 Birmingham.

15 I was an intern, resident, chief resident, fellow, and  
16 an EP fellow there. EP is electrophysiology, or the  
17 arrhythmia world.

18 Q. And I want to talk through each of those stages. But  
19 what led you to become a doctor in the first place?

20 A. I think what led me to become a doctor is my mother's  
21 illness. My mother had a heritable problem called  
22 Ehlers-Danlos Syndrome. It's a genetic disorder that my  
23 sister has too and probably her children do as well. And it  
24 causes aneurysms and can cause unexpected death. It, it  
25 happened to my mother at age 36. My sister had her first

1 disaster at age 48.

2 Q. And so you mentioned that you did your medical school  
3 training in, in Georgia; is that right?

4 A. Correct.

5 Q. How, how long was the medical school curriculum that  
6 you completed?

7 A. Four years.

8 Q. Okay. And then after that, you completed an  
9 internship; is that right?

10 A. That's correct, in internal medicine.

11 Q. And then you did a residency; is that right?

12 A. Yes.

13 Q. And tell the jury what a residency is as compared to  
14 what you do in medical school.

15 A. So when you're an intern and a resident, an intern is  
16 really just a first-year resident. And, and internal  
17 medicine is the study of cardiology and nephrology, kidney  
18 problems, liver problems, all the things that don't involve  
19 surgery and things like that.

20 And, and you really spend three years at the, at the  
21 elbow of the faculty learning how to take care of both  
22 in-patients and out-patients with all internal medicine  
23 problems.

24 Q. And so after you completed your internal medicine  
25 residency, you said you did what's known as a fellowship; is

1 that correct?

2 A. That's correct.

3 Q. Tell the jury what a fellowship is once you've done all  
4 that other training.

5 A. So fellowship is the subspecialty training. And so in  
6 my case, it was a fellowship in cardiology and  
7 electrophysiology. At the time, we did them, did those two  
8 together. Now they're done sequentially. That started in  
9 the late '90s.

10 And, so, my fellowship was in cardiology or the study  
11 of people with heart problems, and then electrophysiology,  
12 which is the study of heart rhythm problems. I was -- when  
13 I started my electrophysiology training, I think there were  
14 40 people in electrophysiology in the country. And now  
15 there are probably 8,000.

16 Q. Where are you licensed to practice medicine?

17 A. In Tennessee.

18 Q. Do you hold any board certifications?

19 A. I'm Board Certified in internal medicine, in  
20 cardiology, and electrophysiology. And I hold a special  
21 certificate in care of patients with pacemakers and  
22 defibrillators.

23 Q. Can you tell the jury what it means when we say Board  
24 Certified?

25 A. So Board -- for any -- for every specialty in medicine

1 there is a certification board that determines what, what is  
2 needed to be Board Certified. That is sort of getting the  
3 good housekeeping seal of approval on the doctor. Not all  
4 doctors are Board Certified. About 75 percent are. And in  
5 some institutions board certification is required. In some  
6 it's not.

7 Q. And what did you do after you completed your fellowship  
8 in cardiology and electrophysiology? Where did you go next?

9 A. I joined the faculty at Wake Forest University in  
10 Winston-Salem, North Carolina.

11 Q. How long were you there?

12 A. I was there from '91 to '99.

13 Q. And what role did you have while you were at Wake  
14 Forest?

15 A. So I was on the faculty performing clinical care,  
16 training students, training residents, training fellows, and  
17 doing a lot of research.

18 Q. And after that eight-year period at Wake Forest, where  
19 did you go next?

20 A. I was recruited to Nashville to help build and then run  
21 a very large cardiology practice known as St. Thomas Heart.  
22 When I got there, we, we merged three different practices  
23 into a group that had 62 cardiologists and 14 heart  
24 surgeons. And I ran that for 10 years.

25 Q. And during the time that you were at St. Thomas, did

1 you participate in what the jury has heard described as the  
2 RE-LY trial?

3 A. I did.

4 Q. Okay. And what role did you have in that?

5 A. I was the local principal investigator. So the way  
6 clinical trials work is there's a principal investigator and  
7 a coordinating committee for the study that's over all of  
8 the sites. And then's a local principal investigator that's  
9 over the study at that institution. And that was my role.

10 Q. Why, why was it that you decided to participate in the  
11 RE-LY trial?

12 A. We were very anxious to participate in the RE-LY trial  
13 to, to have availability of Pradaxa so that our, our  
14 patients could have an alternative to warfarin.

15 Q. Doctor, where do you practice medicine currently?

16 A. Vanderbilt University.

17 Q. How long have you been there?

18 A. Since 2014, four years.

19 Q. And what role do you have at Vanderbilt?

20 A. I'm an associate professor there which means I'm a  
21 senior faculty member. In addition to my clinical role,  
22 taking care of patients with heart rhythm problems, I run  
23 our clinical research, what's called a clinical research  
24 enterprise which is the cardiology clinical trials unit.

25 And when we perform, we -- I don't -- I'm not -- that

1 doesn't make me the principal investigator of those trials.  
2 That makes me the herder of the cats in getting those trials  
3 run.

4 And I also am the medical director of our  
5 electrophysiology lab which is like the cardiac cath lab but  
6 it's for heart rhythm problems for patients that need  
7 pacemakers or defibrillators or ablations. I run that.

8 Then for the next two weeks I still run the  
9 electrophysiology training program. Thankfully I don't need  
10 three, three administrative tasks and I'll, I'll give one up  
11 in a couple weeks to one of my younger colleagues.

12 Q. Okay. In terms of your clinical practice, can you just  
13 give the jury a sense of, for example, what a week looks  
14 like in terms of the number of patients you're seeing and  
15 what types of conditions you're treating?

16 A. So Mondays and Tuesdays are the days that I do studies  
17 in the electrophysiology lab. I put in pacemakers and  
18 defibrillators. I also take out pacemaker wires and  
19 defibrillator wires which is the sort of crazy thing that I  
20 do. People come from all over the southeast for it. It's  
21 just something that I've done for a long time.

22 And on Wednesdays I, I split the time between being in  
23 clinic and doing administrative tasks.

24 And on Thursdays and Fridays I see patients in clinic,  
25 patients with heart rhythm problems. And in all of these

1 things I'm teaching fellows or EP fellows with me, have  
2 those people, and sometimes the medical students with me in  
3 clinic.

4 Q. And in the course of your practice on a weekly basis  
5 are you regularly treating patients with atrial  
6 fibrillation?

7 A. All day, all day every day.

8 Q. Are you regularly treating patients who have coronary  
9 artery disease?

10 A. Yes, ma'am, all day.

11 Q. Okay. As part of your practice over the 20-plus years  
12 that you've been a cardiologist, have you had experience  
13 prescribing the medicine warfarin?

14 A. Yes.

15 Q. Okay. And have you had experience prescribing all of  
16 what you described as the NOACs, Pradaxa, Xarelto and  
17 Eliquis?

18 A. I have.

19 Q. Okay. Do you prescribe all those medicines?

20 A. Yes.

21 Q. Do the patients that you see as part of your clinical  
22 practice include patients who have severe renal impairment?

23 A. They certainly do, uh-huh.

24 Q. Okay. And have you had patients for whom you have  
25 prescribed the 75-milligram dose of Pradaxa because they



1 have severe renal impairment?

2 A. I have.

3 Q. Do you currently have patients who are on the  
4 75-milligram dose of Pradaxa?

5 A. I do.

6 Q. As part of your work as a clinician, have you become  
7 familiar with the labeling for the medicines we've just  
8 talked about, warfarin and Pradaxa, Xarelto and Eliquis?

9 A. I have. I, I've, I certainly -- when I was at St.  
10 Thomas, I ran our pharmacy and therapeutics committee. So  
11 in that role I became very compulsive about reading labels.

12 Q. You mentioned that you're in charge of the clinical  
13 research enterprise at Vanderbilt. As part of your career  
14 in general have you been involved in research and  
15 publication of, of articles in the peer-reviewed literature?

16 A. I have been very involved in clinical research. And I  
17 started with efforts in, in research organization and  
18 research trial execution as early as when I was a fellow.

19 I was part of a performance improvement trial, or  
20 program there that led to some of the things -- some of the  
21 tools and techniques I've used to help clinical research  
22 move forward.

23 Q. And as part of the work that you've done in terms of  
24 clinical research, have you sometimes worked with companies  
25 that make medicines and make medical devices?

1 A. I have.

2 Q. Okay. Is there a reason that you partner with  
3 companies like that to do research?

4 A. Sure. I mean, we -- part of our mission is to do  
5 first-line research. And our goals in the clinical research  
6 enterprise are to do research that, number one, benefits our  
7 patients and brings something to them that they couldn't get  
8 otherwise; and, number two, is first-line research that  
9 allows our faculty to get involved in a position of  
10 leadership and a position where they can publish if they  
11 perform and bring the patients into the trial.

12 Q. Has, has BI ever been one of the companies that you  
13 partnered with in that capacity?

14 A. In the RE-LY trial, yes. And we have done other trials  
15 since I've been at Vanderbilt with BI, but no huge trials.

16 Q. Okay. When the clinical research enterprise partners  
17 with companies like the ones we've been describing, is that  
18 a profit-making operation for the hospital?

19 A. Not at all. The clinical research enterprise is  
20 intended to break even. It is not -- it would be a problem  
21 if it were profit-making. Vanderbilt is not a profit-making  
22 institution and we don't, we don't make profit and we -- but  
23 we do intend to break even on them.

24 When I took over the clinical research enterprise, it  
25 was not breaking even. And I put in some of the contracting

1 strategies that I've used previously and helped with that.

2 One of the things that I have been a big proponent of  
3 is partnering with companies that do a lot of research and  
4 having a global overriding contract that helps us get the  
5 study started.

6 For example, when I started at Vanderbilt, I think it  
7 was about 10 months to start up -- it was something like  
8 that -- from the time we got a trial until we could actually  
9 start it. And we've got that down to about 90 days now. My  
10 target is 60 days. I don't know if I'll get there.

11 But that, that helps, helps us get started earlier and  
12 be more of a meaningful participant in the study. We always  
13 want to be a high-end roller if it's appropriate. We never  
14 want to enroll a patient that wasn't appropriate. That's  
15 very tight -- that's, that's in our core mission is to only  
16 do what's right. The patient always comes first. But we  
17 want to do things that, that result in significant  
18 participation.

19 Q. And to the extent that you, you spend time involved in  
20 some of these clinical research activities, are you  
21 compensated for your time?

22 A. Sure. I'm, I'm paid -- it's part of my salary. I'm  
23 paid -- I am paid to be a faculty member and I'm paid very  
24 little to do the administrative time. Most of our  
25 compensation actually comes from a formula that involves how

1 many patients we see and how many procedures we do. I get a  
2 small amount of my salary from that. I, I do not get paid  
3 directly from the companies for this outside my salary if  
4 that's what you're asking.

5 Q. To the extent that these -- you're working with  
6 companies outside of Vanderbilt, are all of those agreements  
7 and relationships reviewed by the institution?

8 A. By a whole lot of lawyers, yes; the institution and a  
9 compliance office, a contracting office, a legal office, and  
10 an academic office.

11 Q. And what's, what's the purpose of that review?

12 A. Well, part of the review is to make sure -- the  
13 compliance part of it is to make sure that there's no  
14 conflict of interest.

15 The legal office is to make sure we're not promising  
16 things we can't promise and to make sure we have  
17 institutional liability and company liability balanced and  
18 have that in the right way. That's always a difficult thing  
19 with a new drug, and, and just to make sure all the Is are  
20 dotted and the Ts are crossed. Others are responsible for  
21 the nuts and bolts of the contracts.

22 My, my responsibility with the contracts isn't to  
23 negotiate how much we pay for an -- how much we get paid to  
24 do an echocardiogram but it's really to set the, set the  
25 mission and, and try to drive us to be big participants in

1 big studies.

2 Q. In addition to the work that you do at Vanderbilt, are  
3 you also a member of professional organizations related to  
4 the study of heart rhythm specifically and cardiovascular  
5 disease more generally?

6 A. I am.

7 Q. Can you tell the jury about that?

8 A. So the two, the two organizations I participate in the  
9 most are the American College of Cardiology, which is the  
10 organization of cardiologists. And our mission really is to  
11 push forward the quality of cardiac care.

12 We, we spend a lot of time in Washington trying to  
13 lobby for things like improvements in the way healthcare is  
14 administered so that we can get equitable, equitable care  
15 for everybody and get things incentivized in ways that  
16 promote quality, not promote quantity. So that, that's  
17 something that we've been very driven with.

18 The American College of Cardiology sets professional  
19 standards for almost everything in cardiology. And, and  
20 I've been very involved with it. I was the -- on their  
21 Board of Governors. I was the Tennessee chapter president.  
22 And I continue to be involved in that.

23 I'm also a member of the Heart Rhythm Society which we,  
24 we do a lot of advocacy -- like we're -- you may have  
25 heard ads in the last day or two for sudden cardiac death

1 awareness, having, having availability of external  
2 defibrillators and having awareness of the need for internal  
3 defibrillators.

4 Q. Doctor, are you also a reviewer for medical journals  
5 where peer-reviewed literature is published?

6 A. Yes, ma'am.

7 Q. Roughly how many journals do you serve in that role?

8 A. I, I can't -- it's greater than 10, less than 20 I  
9 think.

10 Q. And what does that role involve?

11 A. Whenever a paper is published -- whenever a paper is  
12 submitted for publication, it's typically reviewed by an  
13 editor for a, for a first review.

14 And then if it meets that review, it's sent out to two  
15 or three reviewers. And we review in a blinded way. And we  
16 look at the science. We look at the ethics. We look at  
17 everything in it. We give a review and the authors -- it's  
18 a bit like a tennis match where you bat it back and forth  
19 across the net a few times before you get it to a  
20 publishable state.

21 Q. And have you been an author on peer-reviewed literature  
22 in medical journals?

23 A. Many.

24 Q. When you say many, how many are you estimating?

25 A. It's -- I'd have to look at my CV. I think it's around

1 60 primary papers, 10 or 12 editorials, several book  
2 chapters and, and 150 or so abstracts which are -- abstracts  
3 are the written report of when we present things about our  
4 research at a meeting.

5 Q. Last background topic and then I want to talk about  
6 Mrs. Knight. As part of your -- as a result of your  
7 experience as a researcher and a clinician, are you  
8 sometimes asked to serve as a consultant in litigation like  
9 this?

10 A. Yes.

11 Q. How much of your time do you spend serving as an expert  
12 witness in litigation?

13 A. Not very much of my time other than this case. This,  
14 this case has been very long. I think we're, we're over two  
15 years into it.

16 I, I probably average a case or two a year that I, that  
17 I look at. And most all of them have been medical  
18 malpractice cases. There's only been one previous company  
19 federal litigation case that I participated in.

20 Q. Okay. And are you being compensated for your time for  
21 your work in this case?

22 A. I am.

23 Q. What is your hourly rate?

24 A. \$425 an hour for doing things that don't involve  
25 sitting in the courtroom, and \$650 an hour for, for court

1 time, deposition time.

2 Q. And when you say things that don't involve sitting in a  
3 courtroom, do you mean like reviewing the medical records?

4 A. Reviewing the medical records, talking to the lawyers,  
5 things like that.

6 Q. Okay. Roughly speaking, how much have you, have you  
7 been compensated for your time in this case?

8 A. How much what?

9 Q. Have you been compensated for your time in this case.

10 A. I don't know the total. It's something --

11 Q. Roughly around \$60,000?

12 A. Sixty?

13 Q. Yes.

14 A. If you say so. I'll, I'll trust you. It is -- this  
15 has been a long, crazy thing over, over, over two years with  
16 several sets of lawyers.

17 Q. Okay. I now want to turn to talking a little bit more  
18 about Mrs. Knight. Before Mrs. Knight ever took Pradaxa in  
19 2011, did she also have something known as coronary artery  
20 disease?

21 A. She did.

22 Q. Okay. And you talked about that condition a little  
23 bit. And I'm actually going to ask for the Court's  
24 permission to have you come down and just demonstrate on a  
25 board what we're talking about when we say coronary artery



1 disease.

2 MS. JONES: Is that okay, Your Honor?

3 THE COURT: He may do so.

4 MS. JONES: Okay.

5 THE COURT: If he doesn't have a microphone, you  
6 just need to make sure you speak up so we can hear you,  
7 especially when your back is to the jury.

8 THE WITNESS: I will.

9 So this, this drawing shows a cross section of  
10 arteries. That, that artery may be --

11 Can you hear me okay?

12 THE COURT: Yes.

13 THE WITNESS: So that may be an artery anywhere in  
14 the body. It's meant to display an artery in the heart or  
15 coronary artery.

16 This is what the artery looks like when you're nice and  
17 healthy, when you're 16 years old, 20 years old, haven't  
18 smoked and haven't done a lot of other things and haven't  
19 had the wrong parents.

20 And you can see that the muscle out here is nice and  
21 smooth. The lining is nice and smooth. And that lumen or  
22 the opening there is wide open. And that's the -- that's  
23 how the blood flows through.

24 At some juncture almost all of us get what we call  
25 streaky plaques which are things like this here which is a

1 little deposition of cholesterol and gruel that comes from  
2 high cholesterol, family history, all those things. And,  
3 and that's the beginning of blockage in the heart where you  
4 get -- where it lays that down. And if you were to cross  
5 section -- if you were to take a picture inside of the  
6 artery, that's what you'd be able to see.

7 At that stage, it really doesn't do anything bad to  
8 you. It's just a marker that there's bad things coming.

9 As it progresses, that area there can grow and, and  
10 start to close off that lumen. And at this stage, what  
11 happens is you can have chest pain or what's called angina  
12 which is where you exert yourself and you have a squeezing  
13 sensation in your heart.

14 Because what's happening here is nothing terrible has  
15 happened, but you can't get nearly as much blood flow  
16 through this little slit here as you can through that, that  
17 big tube up there. Make sense?

18 So then what happens is this -- let me get back over  
19 here. Right in the corners here where the plaques are, it  
20 takes the form of crack there. And this, this gruel down  
21 here gets exposed to the blood and it starts forming a clot.

22 It forms platelets first which are the sort of -- what  
23 are called blood platelets or the clotting cells that are in  
24 your blood. They stick first. And then those platelets put  
25 out a material that makes blood clot and, and form around

1 it. And then you get a blood clot that completely closes  
2 off that, that blood vessel.

3 And at this point, you have a heart attack. You have  
4 what we call an, an ST elevation heart attack or a bad heart  
5 attack where your, where your heart -- where the blood  
6 vessel closes off completely and everything downstream from  
7 that dies unless you get to the hospital and get one of my  
8 plumber colleagues to open that up with a balloon or a  
9 stent.

10 Q. Okay. Thank you. You can go ahead and have a seat.  
11 Thanks.

12 Doctor, you mentioned what you described as an ST  
13 elevated myocardia infarction. Is there also something  
14 known as a non-ST elevated myocardia infarction?

15 A. That's, that's correct.

16 Q. Can you tell the jury what that is?

17 A. Yeah. In general, at the time of the heart attack,  
18 that's a less bad heart attack. Unfortunately, the  
19 long-term impact of that is worse than the ST elevation MI  
20 partly because ST elevation heart attacks now, we almost  
21 always get to the emergency room and get open and get --  
22 probably 80 percent of the time, we open those nowadays.

23 A non-ST segment elevation MI is largely caused by  
24 having all three of those arteries in your heart blocked off  
25 and having them -- having an area downstream from there

1 where you just don't get good blood flow. And that can  
2 cause angina. And then if it gets bad enough, it can cause,  
3 it can cause a heart attack.

4 Now, there are other reasons having non-ST segment  
5 elevation in mind too, and that is like in the heart there  
6 are three arteries. And one goes down the front, one goes  
7 down the right side, and one goes on the left side.

8 When the one on the left side gets plugged up, you're  
9 less likely to see that on your EKG and see it as an ST  
10 segment elevation MI. So some really bad, big vessel  
11 occlusion heart attacks look like non-ST segment elevation  
12 MIs.

13 Q. Dr. Crossley, what are the, the major risk factors for  
14 coronary artery disease?

15 A. Smoking, number one. Are you going to write them or --

16 Q. I'm going to write them, yes. None of these markers  
17 seem to work very well. I apologize. You mentioned  
18 smoking?

19 A. Smoking, high blood pressure, high cholesterol,  
20 cholesterol, and a family history, especially of early  
21 coronary disease. Those are the severe risk factors.

22 There are other risk factors too like being overweight  
23 and bad diet and things. Some of those are related to those  
24 four factors.

25 Q. Can, can diabetes be a risk factor?

1 A. Oh, I'm so sorry. Yeah. I totally left that out.

2 Diabetes is certainly one of the major risk factors as well.

3 Q. Based on your review of the medical records for Mrs.

4 Knight over time, did she have any of those risk factors for  
5 coronary artery disease?

6 A. She had all of them.

7 Q. Okay. And what would that mean in terms of her risk of  
8 having a heart attack?

9 A. That just means her risk was much higher than the  
10 average person. I mean, the average person has a very  
11 considerable risk of having coronary disease, especially as  
12 you get older. But if you have multiple risk factors,  
13 especially if you have all those risk factors, your risk is  
14 dramatically high.

15 Q. How do doctors go about actually evaluating in a  
16 patient how much blockage exists in any particular artery of  
17 the heart?

18 A. With, with what's called an angiogram or a heart  
19 catheterization. We put a tube either in the wrist or in  
20 the leg and pass it to the heart and inject a, a contrast  
21 agent that lets us see the blood vessels under X-ray  
22 cameras.

23 Q. And did, did Mrs. Knight actually have a procedure like  
24 that back in 2008 to evaluate the condition of her coronary  
25 artery?

1 A. She did.

2 Q. Okay.

3 A. She had several of those over time.

4 Q. Okay. I'm going to ask you to turn to Exhibit 9007-B  
5 in the binder that you have in front of you. I want to  
6 direct your attention to Pages 27 and 28.

7 A. I am there.

8 Q. And, just generally, Dr. Crossley, do you recognize  
9 Exhibit 9007-B as a collection of medical records for Mrs.  
10 Knight?

11 A. I do.

12 Q. Okay.

13 MS. JONES: Your Honor, we'd move for the  
14 admission of Exhibit 9007-B.

15 THE COURT: Any objection?

16 MR. CHILDERS: No objection.

17 THE COURT: It's admitted and may be published.

18 (Exhibit Number 9007-B admitted into evidence.)

19 BY MS. JONES:

20 Q. Doctor, can you just tell us what we're looking at here  
21 on Page 27 of Exhibit 9007-B?

22 A. What we're looking at is a report of that cardiac  
23 catheterization of, of Mrs. Knight that was done on 11-17,  
24 2008.

25 Q. Okay. And I'm going to ask you if you wouldn't mind,

1 and with the Court's permission, to just come back down for  
2 us once more and talk us through what the doctor saw.

3 MS. JONES: Is that okay, Your Honor?

4 THE COURT: Certainly.

5 THE WITNESS: So this is the way the outside of  
6 the heart looks. This is the right ventricle. That's the  
7 left ventricle. And these red tubes are the arteries that  
8 feed the heart.

9 This is what's called the left main coronary artery.  
10 This is the right coronary artery. This is the circumflex  
11 artery.

12 And, so, what they did is they put a tube -- and I  
13 don't know if it was in her wrist or a leg -- and passed it  
14 up to the heart and injected contrast dye in those.

15 And what they found first is that the pumping chamber  
16 over here -- one of the things we do is to put the tube down  
17 into the pumping chamber and put dye and take a picture.

18 And they found that her ejection fraction was  
19 40 percent at that time. And what ejection fraction means  
20 is we compare the heart when it's full to when it's empty.  
21 And that number, if you're normal, is around 65 percent.  
22 And in hers at this time it was 40 percent. At other times  
23 it was a bit lower than that.

24 This artery, the main artery right there was normal.  
25 And this left anterior descending coronary artery right here

1 had a really tight stenosis in it, really tight narrowing.  
2 And it was 90 percent blocked off, much as that picture we  
3 showed you before.

4 The circumflex artery out here had a minor little  
5 stenosis, a minor little narrowed area there. And then this  
6 first branch here, this marginal branch had another tight  
7 area in it. It was about 70 or 80 percent.

8 Q. And, Dr. Crossley, when you say tight, you mean that  
9 the vessel was quite blocked up?

10 A. It was blocked up, yeah. It was blocked up to 70 or  
11 80 percent.

12 Q. Okay.

13 A. And then the posterior descending artery, which is this  
14 thing right here, had about a 50 percent narrowed area in it  
15 right where that was.

16 Q. Doctor, in the, the angiography results that we're  
17 looking at, there's an item in number eight that says,  
18 "Right coronary artery is the dominant vessel with mild  
19 diffuse disease throughout. There is proximal 30 percent  
20 stenosis." What does that mean?

21 A. That just means there's a lot of gruel and sort of  
22 minor narrowing all in this right coronary here.

23 Do you want me to talk about the angioplasty?

24 Q. Yes, please.

25 A. So then as part of this, they, they took a balloon with



1 a stent on it and opened up this stent, this area right here  
2 with a, with a device that is -- what they -- what we do is  
3 to put a, put a wire across that narrowed area. And then we  
4 put a tube over that that has the balloon on it.

5 And on the outside of the balloon it looks like a wire  
6 cage. And we inflate the balloon to the, to an amount of  
7 pressure that lets us know how big in diameter it is. If we  
8 over-inflate it, it gets bigger. If we under-inflate it, it  
9 gets smaller.

10 And that, number one, opens up that area. And, number  
11 two, that wire mesh helps form sort of a scaffolding and  
12 hold that artery open. And that was done in this area right  
13 here. I think that's all she had in this one.

14 Q. All right. Thank you. You can sit back down, Doctor.

15 Dr. Crossley, you described multiple places where back  
16 in 2008 Mrs. Knight had blockages that her doctors  
17 identified. Could any one of those blockages have led  
18 eventually to a heart attack? Do you have to have a  
19 90 percent blockage to have a heart attack?

20 A. You certainly don't. That, that was proved by my old  
21 boss at Wake Forest University in a famous study where,  
22 where if you look at patients with narrowing in their  
23 arteries who then go on to have a heart attack and try to  
24 predict which one, which one of the narrowed areas caused  
25 the heart attack, basically he showed that any narrowing

1 greater than 30 percent can cause a heart attack.

2 Q. Now, in terms of treating coronary artery disease with  
3 medicines, are there medicines that doctors sometimes  
4 prescribe to patients to try and help them lower the  
5 progression of coronary artery disease?

6 A. Yeah, there, there are lots of medicines that we use in  
7 patients with coronary artery disease. Some of them are  
8 targeted at reducing the stress in the heart. Some are  
9 targeted at opening up the blood flow a little bit if areas  
10 are squeezed down.

11 And the most important ones for the long-term health of  
12 patients with coronary disease are the lipid-lowering agents  
13 or the cholesterol medicines.

14 Q. Are those also known as statins?

15 A. Correct.

16 Q. Okay.

17 A. That's the mainstay. There are other cholesterol drugs  
18 that are, frankly, nowhere near as effective as statins.

19 Q. Based on your review of the, the medical records, was  
20 Mrs. Knight able to take statins?

21 A. Unfortunately, she wasn't. She had what's called  
22 myopathy which is really a type of allergic reaction to the  
23 statins where you get a terrible aching and it just makes  
24 you miserable.

25 And patients, patients who cannot take statins are

1 much, much, much worse off long-term than patients who can  
2 that have coronary disease.

3 Q. Now, you mentioned that in 2008 Mrs. Knight's doctors  
4 placed one stent. Did, did she actually go back at the  
5 beginning of 2009 and have a second stent placed?

6 A. She did. They made a, a choice in her to do one stent  
7 and then come -- to do it in a, quote, staged manner where  
8 you do one stent the first time and bring her back the next  
9 time to do the other stent.

10 And the rationale for that is that you have less chance  
11 of what we call acute stent closure which is where during  
12 the procedure one of the stents can just close down. And if  
13 you do -- the more stents you do, the more likely that is to  
14 happen.

15 So certainly at that time, and even now, that's  
16 commonly done. It's less commonly done now than it was  
17 then. But that was a purposeful staged procedure. And that  
18 one off to the, to the side there where I said there's a  
19 narrow area is the area where she had the second stent  
20 placed.

21 Q. Okay. And just so the jury can see, this is where the  
22 first stent was placed?

23 A. That's correct.

24 Q. Okay. I'm just going to put a star there. And then  
25 there was a second stent placed --

1 A. Right there, uh-huh. That's correct.

2 Q. All right. I'm going to ask you to turn in Exhibit  
3 9007-B to Page 53.

4 A. I am there.

5 Q. Do you recognize that medical record, Doctor?

6 A. I do.

7 Q. And tell the jury what we're looking at here on the  
8 screen.

9 A. This is the report of the catheterization procedure  
10 done on January the 6th, 2009.

11 Q. Okay. And if we scroll down just a little bit, you can  
12 see there's a section -- there's a reference to "Procedure"  
13 up at the top of the screen?

14 A. Yes.

15 Q. And that says, "PCI of the first obtuse marginal  
16 branch." What does that mean?

17 A. That means exactly what we showed. That, that second  
18 asterisk there is where that balloon with the stent on it  
19 was put in there and opened up. Percutaneous coronary  
20 intervention is what PCI stands for.

21 Q. Okay. And a little further down it says  
22 "History/Indications" right under "Procedure."

23 A. Uh-huh.

24 Q. It says, "Ischemic cardiomyopathy --" and before we go  
25 any further, can you just explain to the jury what that

1 means?

2 A. That means that you've had enough coronary disease that  
3 it beats your heart muscle up and your heart muscle doesn't  
4 perform as well. It doesn't squeeze as well as it should  
5 have.

6 Q. And it goes on to say, "Non-ST elevation myocardia  
7 infarction." Now, is that the term we were talking about  
8 earlier?

9 A. It is.

10 Q. Okay. And it goes on in that same section to say,  
11 "Patient is staged multi-vessel PCI. She underwent PCI of  
12 the LAD six weeks ago."

13 Do you understand that to be a reference to the stent  
14 placement in 2008?

15 A. Correct.

16 Q. And it says, "The complexity of her coronary anatomy  
17 due to dextrocardia is one reason the procedure was done  
18 staged."

19 Do you see that?

20 A. I do.

21 Q. And there's a reference there to dextrocardia. I think  
22 the jury has heard that term perhaps a couple of times  
23 during the trial. But could you just briefly explain what  
24 that is and what it meant for Ms. Knight, if anything?

25 A. So dextrocardia is just a birth abnormality. I

1 wouldn't say it's a birth defect. It's when you're born  
2 with what should be on the left side on the right side. And  
3 when it comes -- dextrocardia means that it affects your  
4 heart.

5 My understanding with Ms. Knight is she had what's  
6 called situs inversus which means everything was on the  
7 wrong side. And, so, Ms. Knight's -- it does a couple of  
8 things for you in coronary disease.

9 Number one, it makes it really hard to be able to feel  
10 what you're doing and go where you want to go because you're  
11 used to looking at everybody who has their heart on the left  
12 side.

13 And when you push the wire, you expect it to go where  
14 it's going to go on the left side. And you have to sort of  
15 retrain your brain and sort of look over your shoulder and  
16 do funny things to make your hands work to, to make it -- to  
17 be able to do an angioplasty or a complex intervention on a  
18 patient with dextrocardia.

19 Q. Okay.

20 A. Number two, it changes your symptoms because symptoms  
21 that you would have had on the left side of your body are  
22 now on the right side of your body.

23 Q. And we can take that record down. Thank you, Mr.  
24 Reynolds.

25 Doctor, I wanted to ask you about a series of events

1 after Mrs. Knight's stent placement in November of 2008 just  
2 to see if we can clear up some of the chronology for the  
3 jury.

4 When Mrs. Knight had her stent placed in November of  
5 2008, did her doctors stop her Coumadin treatment, the  
6 anticoagulant that she was on at the time?

7 A. That is my understanding that they did.

8 Q. Okay. And if you -- I'm going to ask you to turn in  
9 your binder to 2000-D.

10 A. To what?

11 Q. 2000 and the letter D. It should be towards the front.

12 A. Okay.

13 Q. And I'm going to ask you to go to Page 4061 if you  
14 would, please. Are you there, Doctor?

15 A. I'm not.

16 Q. Okay.

17 A. I am there.

18 Q. Okay. And, Dr. Crossley, do you recognize that as one  
19 of the records relating to Mrs. Knight's medical care in the  
20 2008-2009 time period?

21 A. I do.

22 Q. Okay.

23 MS. JONES: Your Honor, we'd move for the  
24 admission of Exhibit 2000-D which is just an excerpt of I  
25 think the broader set of medical records.

George Crossley - Direct (Jones)

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1 THE COURT: Any objection?

2 MR. CHILDERS: No objection, Your Honor.

3 THE COURT: It's admitted.

4 (Exhibit Number 2000-D admitted into evidence.)

5 BY MS. JONES:

6 Q. Can you put that up, please, Mr. Reynolds, and go to  
7 Page 4061?

8 (Pause)

9 MS. JONES: I'll just use the ELMO if that's okay.

10 THE COURT: All right.

11 BY MS. JONES:

12 Q. Dr. Crossley, do you see that document?

13 A. I can.

14 Q. All right. And you have a copy in your binder.

15 A. I have a copy.

16 Q. Okay. So up at the top of the -- at the top of the  
17 record do you see there's a reference to Mrs. Knight;  
18 correct?

19 A. Correct.

20 Q. And then there's that date of February the 8th, 2009,  
21 the date of a hospital admission she had at the beginning of  
22 2009. Do you see that?

23 A. Correct.

24 Q. If we move down in the record, there's a section that's  
25 entitled "History of Present Illness." Do you see that?



1 A. I do.

2 Q. Okay. And at the beginning of that section it says,  
3 "This is an 80-year-old white female with a past medical  
4 history significant for coronary artery disease, status post  
5 bare metal stent to LAD and left circumflex artery in  
6 November of 2008 and January of 2009 respectively."

7 And is that just a more complicated way of saying she  
8 had two stents placed, one in November and one in January?

9 A. Correct.

10 Q. Okay. It goes on in that same reference to History of  
11 Present Illness about midway down, "Patient has been on  
12 Coumadin in the past, however, it was held because of the  
13 percutaneous coronary intervention and it was not restarted."

14 Do you see that?

15 A. I do see that.

16 Q. And, so, is that consistent with your understanding  
17 that when Mrs. Knight had her stent procedure in November of  
18 2008 that they held her Coumadin treatment?

19 A. That's correct.

20 Q. Okay. I want to ask you about another record that  
21 talks a little bit more about that decision. We're going to  
22 go to 9009-B in your binder.

23 A. I'm there.

24 Q. Dr. Crossley, do you recognize 9009-B as a collection  
25 of records for Mrs. Knight?

1 A. I do.

2 Q. Okay.

3 MS. JONES: Your Honor, we'd move for the  
4 admission of 9009-B.

5 THE COURT: Any objection?

6 MR. CHILDERS: No objection, Your Honor.

7 THE COURT: The record is admitted.

8 (Exhibit Number 9009-B admitted into evidence.)

9 MS. JONES: Page 273, please.

10 THE WITNESS: 278?

11 BY MS. JONES:

12 Q. 273, please. I apologize.

13 A. I'm there.

14 Q. Okay, all right. So just up at the top of the page,  
15 Doctor, do you see that this is a progress note by Dr. Skuli  
16 Gunnalaugsson dated December 5th, 2008?

17 A. I do.

18 Q. Okay. And do you have an understanding of who Dr.  
19 Gunnalaugsson is?

20 A. I do.

21 Q. Who is he?

22 A. He's the cardiologist that took care of Ms. Knight.

23 Q. Okay. And, so, December 5th, 2008, that would have  
24 been after Mrs. Knight's first stent placement but before  
25 her second one; is that correct?

George Crossley - Direct (Jones)

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1 MR. CHILDERS: Your Honor, may we have a sidebar?

2 THE COURT: Yes.

3 (Bench conference on the record)

4 MR. CHILDERS: Your Honor, I want to object to  
5 this as cumulative. We went over the exact same record, the  
6 exact same issues yesterday with their other expert witness  
7 and I understood today they were not going to cover the same  
8 ground. This is the exact record and the exact same  
9 questions that were asked about.

10 MS. JONES: Well, I think we're certainly  
11 permitted to cover with our cardiology expert the records  
12 related to her cardiology treatment over time. I will be as  
13 efficient as I can be, but I don't think that there's any  
14 prohibition on us to eliciting testimony from the expert on  
15 the subject.

16 THE COURT: Well, since he's a cardiologist, I'll  
17 allow it. But I would direct that you not spend a great  
18 deal of time on this because then I think it would be  
19 cumulative.

20 MS. JONES: I understand. And frankly, Your  
21 Honor, part of the reason that we're doing this is because I  
22 think there was an issue raised during cross-examination of  
23 Dr. Shami regarding triple therapy and when Mrs. Knight was  
24 on triple therapy, et cetera. I think we're entitled to  
25 address that.

George Crossley - Direct (Jones)

1 THE COURT: All right.

2 (Bench conference concluded)

3 THE COURT: Okay. Go ahead.

4 MS. JONES: Thank you, Your Honor.

5 BY MS. JONES:

6 Q. Again, Dr. Crossley, just to understand the chronology  
7 here, there's a section entitled "History of Present  
8 Illness." Do you see that?

9 A. I do.

10 Q. And it says, "Ms. Knight is a 79-year-old woman with a  
11 history of coronary disease. She has dextrocardia. I did a  
12 stenting of her LAD with a bare metal stent two weeks ago.  
13 She has had some bleeding and therefore a bare metal stent  
14 was chosen." Do you see that?

15 A. I do.

16 Q. What do you understand that statement to be referring  
17 to in terms of bleeding and a bare metal stent being chosen?

18 A. So there are two kinds of stents that are used. There  
19 are hundreds of models of stents, but there are basically  
20 two kinds. And they're either bare metal stents or  
21 drug-eluting stents.

22 The bare metal stents require that you be on strong  
23 blood thinners, strong platelet blood thinners for at least  
24 a month and preferably longer. The, the drug-eluting stents  
25 require that you be on it for at least a year and preferably

1 for your life.

2 So I think what this has to do is Dr. Gunnalaugsson  
3 trying hard to avoid any really strong blood-thinning for  
4 Ms. Knight because she had so many things going on where we  
5 have to use three different blood thinners all at once or  
6 what we call triple therapy.

7 Q. Okay. And if you turn back to Page 275 of Exhibit  
8 9009-B there's a section entitled "Assessment and Plan." Do  
9 you see that?

10 A. I do.

11 Q. Okay. And it says, "79-year-old woman with  
12 dextrocardia who has mild ischemic cardiomyopathy." Do you  
13 see that?

14 A. Yes.

15 Q. And then it refers to the successful stenting of Mrs.  
16 Knight's LAD vessel. That's what you described earlier?

17 A. It is.

18 Q. Okay. And then it goes on to say, "The procedure was  
19 scheduled for the next stenting of January 6th, 2009. She  
20 has been on Coumadin for atrial fibrillation but this was  
21 stopped because of her chronic bleed. She will remain on  
22 the aspirin and Plavix."

23 Do you see that?

24 A. I do.

25 Q. And what do you understand that to be referring to in

1 terms of her doctor's treatment of her during this time  
2 period?

3 A. So it was Dr. Gunnalaugsson's assessment that she was  
4 bleeding and had significant blood loss while she had been  
5 on Coumadin. And he was concerned about the idea of using  
6 triple therapy.

7 So what he chose to do is to stop the warfarin or the  
8 Coumadin and just use the Plavix and aspirin. Plavix and  
9 aspirin is great therapy to keep the stent from being  
10 plugged up, but it's not great therapy to keep you from  
11 having a stroke from atrial fibrillation. It was sort of a  
12 rock-and-a-hard-place kind of decision.

13 Q. Okay. Then do you have an understanding that after  
14 Mrs. Knight was taken off of her Coumadin that she actually  
15 had a blood clot during that period?

16 A. I do.

17 Q. Okay. And from your perspective as a doctor who treats  
18 patients with atrial fibrillation and treats patients with  
19 anticoagulation, what's the significance of that in terms of  
20 what was going on with her?

21 A. I think Ms. Knight is just incredibly lucky that that  
22 blood clot landed in her arm in a place where it could be  
23 taken care of rather than landing in her brain and causing a  
24 stroke or landing in her heart and causing a big heart  
25 attack.

1 A clot like that is the same no matter where it lands.  
2 It, it still comes out of the lining of the heart caused by  
3 the atrial fibrillation, and it goes wherever it lands.  
4 Unfortunately, many times that's the brain. In her  
5 fortunately this time it was the arm and she was able to  
6 recover from it.

7 Q. Doctor, I'm going to ask you to refer in your binder  
8 again to -- do you have a 2000-D tab in your binder?

9 A. I do.

10 Q. And do you have an understanding based on your review  
11 of the medical records that after Mrs. Knight had the blood  
12 clot that went to her arm that her doctors decided that she  
13 needed to be put back on Coumadin?

14 A. That's my understanding.

15 Q. Okay. And, so, would that have been placing her on  
16 triple therapy, what the jury has heard described as triple  
17 therapy?

18 A. That's right. Triple therapy means you're on a  
19 chemical blood thinner like warfarin and the NOACs plus  
20 Plavix plus aspirin.

21 Q. I want to ask you about a record related to her care by  
22 Dr. Gunnalaugsson during this period when she had been put  
23 on triple therapy with Plavix and aspirin and warfarin. I'm  
24 going to ask you to turn to 9005-B in your binder and go to  
25 Page 26.

1 A. I am there.

2 Q. And if we look at the History of Present -- actually,  
3 first, just to orient ourselves, this is in March of 2009;  
4 is that correct?

5 A. That's correct.

6 Q. You see up on the left-hand side, March the 12th of  
7 2009. And do you also see that this is a record from Dr.  
8 Gunnalaugsson of his treatment of Mrs. Knight during this  
9 period?

10 A. Correct.

11 Q. Okay. And then in the History of Present Illness it  
12 describes Mrs. Knight and says she has not been on Coumadin  
13 because of GI bleed. Do you see that?

14 A. Correct.

15 Q. And is that consistent with your review of the medical  
16 records that her doctors had an understanding or a sense  
17 that she had had a GI bleed at some point?

18 A. That's correct.

19 Q. Okay. It goes on to say, "She had an embolus down her  
20 right arm. She was since put on Coumadin." Do you see  
21 that?

22 A. I do.

23 Q. Okay. And if you look at the section entitled  
24 "Medications" down at the bottom of the page --

25 A. I see that.



1 Q. There's a little box in the middle of my screen. Do  
2 you see there's a reference to Plavix at the top? Do you  
3 see that?

4 A. I do.

5 Q. And there's a reference to aspirin. Do you see that?

6 A. I do.

7 Q. And then if we go to the next page of that record, Page  
8 27, there's also a reference to Coumadin. Do you see that?

9 A. I do.

10 Q. And so at this point in time, Mrs. Knight was on triple  
11 therapy?

12 A. That's correct.

13 Q. Okay. Let's go to the Assessment and Plan section  
14 which is towards the bottom of that same record. It refers  
15 to a 79-year-old woman with coronary artery disease  
16 status-post multi-vessel intervention with bare metal  
17 stents. Do you see that?

18 A. I do.

19 Q. And it says, "The patient has a serious problem with  
20 anemia requiring blood transfusions. Unfortunately, I don't  
21 think she can take Coumadin, aspirin and Plavix."

22 Do you see that?

23 A. I do.

24 Q. And do you have an understanding of what Dr.  
25 Gunnalaugsson was, was referring to there?

1 A. I do.

2 Q. And what's that?

3 A. That, that there was -- she was -- she had obviously  
4 had blood loss somewhere. She had certainly had anemia.  
5 And her course later shows us it was not renal failure or  
6 other things.

7 And, and so his assessment was that that was from  
8 bleeding somewhere. And he was very concerned about the  
9 concept of having her on triple therapy.

10 Q. Okay. And he goes on to say, "I think she can stop the  
11 Plavix now. I explained to them that there might be a  
12 slight increase of stent thrombosis but I think the risk of  
13 her having a bleed outweighs that risk."

14 Do you see that?

15 A. I do.

16 Q. And it says, "She will obviously remain on the Coumadin  
17 and continue the aspirin."

18 Do you see that?

19 A. I do.

20 Q. And what is Dr. Gunnalaugsson explaining there based on  
21 your review of Mrs. Knight's medical record?

22 A. So what he's doing here is trying to navigate the  
23 waters of this rock and a hard place I mentioned earlier  
24 which is you've got a lady who's at tremendous risk for  
25 bleeding, tremendous risk of stroke, and has brand new

1 stents in her heart, and trying to look at that and trying  
2 to figure out what the least risky thing he can do is with  
3 the most benefit.

4 And in her, she's shown us that she has such a  
5 disastrous risk of stroke, he chose to push for stroke  
6 prevention more than stent clogged up kind of prevention.

7 The stents don't clog up from a typical blood clot.  
8 They clog up from platelets sticking to them, what we call a  
9 platelet plug. And, and so that's why with bare metal  
10 stents they get pretty much covered up with tissue by the  
11 end of the month.

12 And so he was sort of trying to navigate those waters  
13 and do what the best thing was for this lady with a lot of  
14 medical problems.

15 Q. Now, let me ask you this question, Dr. Crossley.  
16 During the time that Mrs. Knight was on triple therapy with  
17 warfarin, as far as you know, did she have a bleed?

18 A. His record indicates that, that she had a history of a  
19 bleed. I can't tell whether it happened while she was on  
20 triple therapy or before that. I certainly -- by his record  
21 it occurred while she was on warfarin.

22 So I, I don't know -- I don't -- there's not a record  
23 in here of a big GI bleed while she was on triple therapy  
24 with warfarin.

25 Q. Okay. And that leads me to my next question that I

1 wanted to ask you. Does the fact that Mrs. Knight didn't  
2 have a bleed while she was on triple therapy with warfarin  
3 back in 2009 mean that she couldn't have had a bleed if she  
4 was on triple therapy with warfarin in 2013?

5 A. No, it certainly doesn't. It doesn't mean she wouldn't  
6 have had a bleed the next day after he stopped it. He was  
7 referring to the risk of having her on triple therapy there  
8 as being a pretty risky kind of venture, but something we  
9 have to do sometimes.

10 Q. We can take that down. Thank you, Mr. Reynolds.

11 Doctor, you described how coronary artery disease can  
12 lead to a heart attack. Even if a patient doesn't have a  
13 heart attack, can the patient nevertheless have symptoms  
14 related to progressing coronary artery disease, that  
15 blockage of the vessels?

16 A. Certainly you can because that progressive blockage  
17 diminishes blood flow to your heart. You can have little  
18 microscopic heart attacks that you don't know about. And  
19 then you can just have that narrowing causing an ailing  
20 muscle like a -- it's like you've got a cramp in your heart.

21 Q. In your review of the records for Mrs. Knight did you  
22 see any indication that she had those types of symptoms  
23 consistent with progressing coronary artery disease?

24 A. Those are, those are throughout the record. She's  
25 continuously having complaints of feeling fatigued,

1 shortness of breath, having this right-sided pain that went  
2 up to her neck and her right arm which might sound like it's  
3 not from your heart but, remember, her heart's in the other  
4 way.

5 And so instead of having pain here that goes to your  
6 left arm, she had pain here that went to her right arm.  
7 And, so, those are very classic symptoms. I mean, the fact  
8 is women can have lots of goofy symptoms from coronary  
9 disease. But what she had is pretty classic symptoms.

10 Q. And what we've just discussed in terms of her coronary  
11 artery disease treatment, the stenting, the angiogram, was  
12 that all before she ever started Pradaxa?

13 A. Yes.

14 Q. Now, the jury has heard that Mrs. Knight also had  
15 atrial fibrillation. And they have heard about what atrial  
16 fibrillation is. So I don't want to recover all that in  
17 great detail.

18 But just from your perspective as a cardiologist, can  
19 you explain to the jury what is atrial fibrillation? How  
20 does it work medically?

21 A. So atrial fibrillation is an irregular heart rhythm  
22 that comes from the heart's upper chambers. And it makes  
23 the heart try to beat electrically so fast and it just can't  
24 contract. It just sort of quivers like a bag of worms is  
25 the, is the classic description that's relatively impolite,

1 but that's the classic description.

2 And there are two little pouches that come out the  
3 front of the, of the atrium, one on the right side and one  
4 on the left side. And they're very rough on the inside.  
5 And in those pouches are where we typically have clots form  
6 that then break loose and go to the brain and can cause  
7 heart attacks.

8 Atrial fib can cause -- excuse me -- go to the brain  
9 and cause strokes. It can go to the heart and cause heart  
10 attacks. It can go to the liver and cause problems there.  
11 It can go to the kidney and cause problems there.

12 The -- in addition to causing strokes, atrial  
13 fibrillation creates more atrial fibrillation because AFib  
14 creates more AFib. It certainly sets you up for heart  
15 failure.

16 I think Ms. Knight had a lot of heart failure because  
17 of her blockage in her heart, but she also probably had a  
18 good bit of heart failure because of her atrial fibrillation  
19 too.

20 Q. And do you have a sense to what extent having AFib  
21 increases a person's stroke risk?

22 A. It's tremendous. So we, we have -- I mean, when we  
23 assess the stroke risk in a patient, we use a scoring system  
24 that, that applies only to patients with AFib. It doesn't  
25 apply to patients that don't have AFib. But it's called a

1 CHADS2-VASc score.

2 Q. Okay. And did we actually put something together just  
3 to talk the jury through that?

4 A. Yes.

5 Q. Okay. Could you call that up, Mr. Reynolds.

6 Okay. You mentioned the CHADS2-VASc score. What is  
7 the CHADS2-VASc score?

8 A. So it's, it is, as I said, a scoring system that helps  
9 us when we look at a patient with AFib judge what their risk  
10 of stroke is. And it's pictured on the screen here.

11 And the C stands for congestive heart failure. The H  
12 stands for hypertension, age, diabetes, stroke, vascular  
13 disease. Age less than, than -- between 65 and 74 gets you  
14 one point. Age over 75 gets you two points. And having  
15 female gender gets you a point.

16 Q. Okay. And there's one thing I just wanted to clarify.  
17 That reference to vascular disease, what does that mean?

18 A. That means you've got atherosclerosis, or that  
19 narrowing in your blood vessels somewhere in your body. And  
20 it certainly includes what she had with her coronary artery  
21 disease.

22 Q. Okay. Well, that was going to be my next question. To  
23 what extent did Mrs. Knight have any of these stroke risk  
24 factors?

25 A. She had all of these which is an incredibly unusual

1 situation to have the highest risk score you can have on  
2 this scale.

3 Q. And what does that mean in terms of her risk of stroke?

4 A. What that -- if we add all these up, it gives her a  
5 score that translates into an annual risk of stroke of I  
6 think it's 14.8 or 9 percent. It's something just shy of  
7 15 percent.

8 That means, you know, in three years you've got a  
9 45 percent chance of having a stroke. In six years you've  
10 got a crazy high risk of stroke.

11 And it means -- you know, when we look at patients, we  
12 strongly recommend blood thinners on anybody that has a risk  
13 of two -- has a score of two. Her risk was -- her score was  
14 nine.

15 Q. Have you had patients with atrial fibrillation who had  
16 a stroke?

17 A. Yes, I certainly have.

18 Q. And can you just give the jury a sense of the range of  
19 outcomes that, that a doctor can see with a patient who has  
20 a stroke from atrial fibrillation?

21 A. You, you can have any range of outcomes from relatively  
22 minor strokes to major strokes. But the sad thing is that  
23 strokes -- strokes come principally from two different  
24 things, either blockage in your neck vessels or atrial  
25 fibrillation and clots that form in your heart that break



1 loose.

2 And the ones that come from your heart tend to be  
3 bigger strokes. They tend to occlude half the blood flow to  
4 the brain and leave you unable to move or sense one side of  
5 your body or unable to speak, depending on which side of the  
6 brain it affects. They, they certainly can be bigger  
7 strokes, disastrous.

8 I mean, the health outcome from a stroke in AFib is  
9 just disastrous. And that's the reason we spend so much  
10 time and effort trying to prevent strokes.

11 Q. And you mentioned disability and you mentioned they  
12 both can have minor strokes. Can strokes be fatal?

13 A. Strokes can certainly be fatal in the short term and  
14 they can be fatal in the long term too.

15 Q. And what do you mean by that, they can be fatal in the  
16 long term?

17 A. Well, it leaves you with great debility. And, I mean,  
18 anything that puts you in bed and makes you inactive is  
19 going to lead to a downhill course for you. And, and  
20 long-term that's how it does it long-term. But even  
21 short-term the risk of stroke can be very high.

22 Q. Have you had patients express to you how seriously they  
23 view the possible consequences of having a stroke?

24 A. So when I sit down with a patient with AFib and  
25 approach the, the concept of anticoagulation, I use what we

1 now call shared decision-making which is a -- it wasn't  
2 talked about when Ms. Knight was, was having this. But, but  
3 we -- I think all good doctors have long done that.

4 And that is you sit down with a patient and you say,  
5 "Here are the bad things that can happen. Here's the  
6 therapy we can give you. And here's the bad stuff that can  
7 happen from the therapy and the good stuff that can happen  
8 from the therapy and let's decide together what it is."

9 Frankly, in addition to the CHADS2-VASc score, we also  
10 use another scoring system that gives you your risk of  
11 bleeding. And in Ms. Knight's case, her risk of bleeding  
12 was about -- her risk of a major bleed from being on blood  
13 thinners was close to 10 percent per year. And, so, what we  
14 typically do is sit down and have that discussion.

15 One of the things that's difficult for patients and  
16 their families in thinking about this is weighing the stroke  
17 risk versus the bleeding risk. There's lots of things in  
18 the medical literature that compare stroke risk versus  
19 bleeding risk on a graph and try to draw equivalence between  
20 the two. And they're certainly not equivalent.

21 Having a big bleed is a bad thing and sometimes makes  
22 you sick and sometimes takes a while to get over it. But  
23 having a big stroke you can rarely recover from.

24 And, so, those are not two things that are equivalent.  
25 Bleeding is bad, but stroke is much, much worse. And so

1 guiding patients through that risk-benefit analysis is just  
2 part of being a good doctor. And it certainly sounds like  
3 Dr. Gunnalaugsson and Dr. MacFarland did that by the record.  
4 Their record reflects that they did.

5 Q. One of the items that's listed in the CHADS2-VASc  
6 system that you described is stroke. That's the reference  
7 to a prior stroke?

8 A. It is.

9 Q. Okay. And did you see in the medical records evidence  
10 that Mrs. Knight had had a stroke before?

11 A. I did.

12 Q. Okay. And what would that mean in terms of increasing  
13 her risk of having another stroke?

14 A. So the stroke gives you two points. And that's  
15 probably -- if, if there's criticism of this scale, it's  
16 that stroke isn't valued high enough and that gender is  
17 valued too high.

18 If we were going to redo the scale today, stroke would  
19 probably have three points and gender would probably have  
20 half a point. But that's, you know, that's a committee  
21 decision and will probably happen in the next year or two.

22 Q. Okay. And just to follow up on that, this, this system  
23 of scoring stroke risk, was that developed as a consequence  
24 of scientific and medical discussions?

25 A. It certainly was. There was a prior system called the

1 CHADS score which was simpler. And it was -- the  
2 CHADS2-VASc score was developed in Europe and then rapidly  
3 became used all over the world because it was better than  
4 the CHADS score.

5 Q. We can take that down. Thank you, Mr. Reynolds.

6 Before Pradaxa was approved in, in atrial fibrillation  
7 patients in the United States, what would the option have  
8 been for Mrs. Knight's doctors if they wanted to give her an  
9 oral anticoagulant therapy?

10 A. Warfarin.

11 Q. Okay. And it sounds like you have experience treating  
12 patients with warfarin; is that right?

13 A. Oh, yes.

14 Q. Okay. And you have patients on warfarin today I take  
15 it.

16 A. I have lots of patients on warfarin. In fact, our, our  
17 Coumadin clinic at Vanderbilt has 41 nurses that man it.

18 Q. Okay. And why is it necessary to have 40 or so folks  
19 who are devoted to a clinic for managing patients on  
20 warfarin?

21 A. Because it's very tedious. It is -- there are many,  
22 many things that affect your blood clotting level with, with  
23 warfarin. What you had for breakfast can affect it.  
24 Antibiotics and other drugs affect it disastrously as we can  
25 see in, in her record.

1 I remember one spot in the record, in Dr. MacFarland's  
2 records where she went from an INR that wasn't thin to an  
3 INR that was way too thin in just a couple of days after she  
4 had been given an antibiotic called Levaquin for a  
5 respiratory infection. And that's very typical. There's  
6 nothing unusual about that in Ms. Knight.

7 When we, when we look at the results of big clinical  
8 trials where we've got patients in a research trial, and  
9 they're hovered over to a great degree to make sure that  
10 they take their drugs and make sure that they understand  
11 what to do with their diet and everything, they are still in  
12 the therapeutic range only about 60 percent of the time  
13 most, at the most. Some of the trials are as low as  
14 50 percent, but 60, 55, 60 percent of the time is typical.

15 So when you're, when you're on warfarin and your blood  
16 is too thin, then you've got significantly increased risk of  
17 bleeding. And when you're on warfarin and your INR is less  
18 than 2, that measure of how thin your blood is is less than  
19 2, then your risk of stroke goes dramatically up.

20 Q. Now, as a result of what you've just described in terms  
21 of what's necessary to manage patients on warfarin, are  
22 patients on warfarin required to have their blood monitored?

23 A. Yes. We, we typically monitor it weekly or more as  
24 we're initiating the warfarin. And then if, if it gets into  
25 control and stays there at least monthly for the rest of

1 their lives.

2 Q. And basically --

3 A. Probably only about a third of our warfarin patients in  
4 our Coumadin clinic are on monthly follow-up though.

5 Q. In your experience as a clinician, is it a common or a  
6 typical thing that a medicine would require that type of  
7 monitoring, blood monitoring?

8 A. No, it's not. There are very few -- there are very few  
9 drugs where we, where we monitor drug levels. I mean, there  
10 are a few antibiotics that we do and there are a handful of  
11 other drugs, some cancer drugs where we do. But that is not  
12 a common thing.

13 And it has to do with what we call therapeutic index of  
14 the drug. And that is if a drug has a broad therapeutic  
15 index, if we give a little or a lot, the effect is  
16 relatively constant over, over that area.

17 And if the drug has a narrow therapeutic index, if we  
18 give a little, there's no effect. If we give a lot, there's  
19 way too much effect. And the classic drug for that that's  
20 always talked about in pharmacology is warfarin for that  
21 purpose.

22 Q. And, Dr. Crossley, I'm going to ask you to turn to  
23 9009-S in your binder.

24 A. I'm there.

25 Q. And I'm going to actually ask you to just flip back to

1 Page 173, that first actual record with the handwriting on  
2 it.

3 A. Yes.

4 Q. Okay. And if, if you just flip through those records,  
5 do you recognize that as a compilation of Mrs. Knight's INR  
6 measurements --

7 A. I do.

8 Q. -- over time? And the jury has heard about much of  
9 this already so we're not going to go back through all of  
10 that. But can you just generally give the jury a sense  
11 based on your experience as a cardiologist of how Mrs.  
12 Knight did in terms of INR control over time?

13 A. She, she did -- her response to her INR was not  
14 atypical, but it was very poorly controlled. I mean, if you  
15 look through here, you see times where it's up around 4  
16 where your risk of bleeding is dramatically high.

17 And where your -- and on the next page, for example, on  
18 8-9 it was 4.3. And on 8-16 it was 1.8. And 1.8 probably  
19 doubles your stroke risk. As it comes down below 2, there's  
20 a dramatic increase in stroke. And we see it -- that's sort  
21 of the pattern as you go through here.

22 Q. And, Doctor, I was going to ask you, have you ever had  
23 experience with patients who declined to take warfarin  
24 because they found the blood monitoring to be challenging or  
25 burdensome for some reason or another?

George Crossley - Direct (Jones)

1 A. Yes. And I had patients before we had NOACs that  
2 declined anticoagulation because of that. We have lots of  
3 patients now that strongly prefer to be on NOACs so that  
4 they can avoid taking, you know, having their blood checked  
5 every week or two or whatever it takes.

6 Q. And when you say NOACs, you mean the newer agents like  
7 Pradaxa and Xarelto and Eliquis?

8 A. That's correct.

9 Q. Okay. Have you ever had a patient who started on  
10 warfarin and then later said, "I don't think I can continue  
11 to use this medicine because the monitoring is too  
12 challenging"?

13 A. Yes.

14 Q. Did you actually see an instance in Mrs. Knight's  
15 record where she communicated that to her doctor?

16 A. I don't remember that.

17 Q. Okay. We'll find that record for you.

18 THE COURT: We need to take a break at some point.

19 MS. JONES: Yes, of course. This is the perfect  
20 time actually.

21 THE COURT: All right.

22 Ladies and gentlemen, we're going to take a ten-minute  
23 recess. You can retire to the jury room.

24 Doctor, you can step down. Don't discuss your  
25 testimony.



George Crossley - Direct (Jones)

1501

1 THE WITNESS: Thank you.

2 (Recess taken at 10:34 a.m.)

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George Crossley - Direct (Jones)

1502

1 (Back on the record at 10:44 a.m.)

2 THE COURT: All right. Are we ready?

3 Let's bring the jury out.

4 THE COURT SECURITY OFFICER: Yes, Your Honor.

5 (Jury present.)

6 THE COURT: All right. Be seated.

7 You may resume your examination.

8 MS. JONES: Thank you, Your Honor.

9 Your Honor, may I approach just to hand the witness a  
10 document?

11 THE COURT: Yes.

12 (Off the record.)

13 MS. JONES: Folks, can you hear me okay?

14 Okay. Dr. Crossley, just to wrap up what we were just  
15 talking about, I've handed you what we've marked as Exhibit  
16 9003.

17 Q. Do you recognize that as medical records for Mrs. Knight  
18 from 2008?

19 A. I do.

20 Q. Okay. And I'm going to ask you to turn to page -- I think  
21 you have page 10 in front of you; is that correct?

22 A. I do.

23 Q. Okay.

24 MS. JONES: Your Honor, we move for the admission of  
25 9003.

George Crossley - Direct (Jones)

1503

1 THE COURT: Any objection?

2 MR. CHILDERS: No objection, Your Honor.

3 THE COURT: It's admitted.

4 (DEFENDANT'S EXHIBIT 9003 ADMITTED INTO EVIDENCE.)

5 BY MS. JONES:

6 Q. And just to situate ourselves, up at the top of the page,  
7 you see this is a record from August of 2008 by Dr.

8 MacFarland, Mrs. Knight's primary care doctor?

9 A. I do.

10 Q. Okay. And I actually just want to ask you about a  
11 reference on page 12 of Exhibit 9003.

12 A. Okay.

13 Q. There is a section entitled Diet, and I'm actually going  
14 to ask you to look at the second paragraph in that section.

15 It says: She is currently off coumadin. We will try the  
16 Plavix and aspirin. It was explained to her that coumadin is  
17 the gold standard, but she does not want to come to the office  
18 to get blood work checked as frequently as you need to with  
19 coumadin and has declined to be on coumadin.

20 Do you see that?

21 A. I do see that.

22 Q. And is that consistent with your own clinical experience  
23 that sometimes patients decline to be on warfarin or coumadin  
24 because they find the monitoring of the medicine to be  
25 challenging for some reason or another?

George Crossley - Direct (Jones)

1504

1 A. That's correct.

2 Q. Okay. Dr. Crossley, do you have an understanding that in  
3 2011, Mrs. Knight's anticoagulation therapy was switched from  
4 warfarin to Pradaxa?

5 A. I do.

6 Q. Okay. And the jury has heard a good bit about that, so I  
7 actually just want to ask you a couple of questions.

8 In your opinion, based on what you reviewed in Mrs.  
9 Knight's medical records, do you believe that was an  
10 appropriate decision on the part of her doctors, a reasonable  
11 decision?

12 A. I certainly do.

13 Q. Okay.

14 A. Yes.

15 Q. Tell the jury why you think that.

16 A. I would have strongly encouraged Mrs. Knight to change to  
17 one of the NOACs. And the reason is because you could see in  
18 the record her marked variability in her warfarin level. And  
19 coupled with the fact that in the clinical trials of all of  
20 the NOACs, the drugs including Pradaxa did better in terms of  
21 stroke prevention than warfarin did and had minor differences  
22 in term of what the bleeding risk was.

23 So while -- while in Pradaxa I'll give you that there were  
24 slightly more GI bleeds, there were less head bleeds and less  
25 terrible bleeds than there were, and I certainly would have

George Crossley - Direct (Jones)

1505

1 switched her. I would have strongly encouraged her to find a  
2 way to be on one of these drugs.

3 Q. Okay. Let me ask you another question on the same topic.

4 Would it have been unreasonable or below the standard of  
5 care for Mrs. Knight's doctors if she had stayed on warfarin  
6 and not moved her to Pradaxa?

7 A. So I don't think it would have been a deviation from the  
8 standard of care for sure. It certainly would have been  
9 within the standard of care. I just think moving her to a  
10 NOAC made her at much less risk for having a stroke, and  
11 that's the reason to have done that.

12 Q. Doctor, do you have an understanding that Pradaxa is a  
13 medicine that is excreted by the kidneys?

14 A. Certainly.

15 Q. Okay. And when Dr. MacFarland's office prescribed Pradaxa  
16 to her, do you have an understanding that they actually  
17 assessed her kidney function to determine which dose would be  
18 appropriate for her under the label?

19 A. I do understand that.

20 Q. Okay. And based on your review of the records, was she  
21 properly dosed based on her renal function?

22 A. She was given the dose that I would have chosen for her.

23 Q. And what dose was that?

24 A. 75 milligrams twice per day.

25 Q. And what is the reason that you would have given her that

George Crossley - Direct (Jones)

1506

1 dose?

2 A. So because her renal function was right at the edge of  
3 the -- in the severe renal function range. Those words don't  
4 mean much. But if the creatinine -- the recommendation is if  
5 the creatinine clearance is between 15 and 30, which is a  
6 measure of how your kidneys are working from a chemical  
7 sense -- not how much urine you create, but how much they're  
8 working from a chemical sense -- that the Food and Drug  
9 Administration approved this 75-milligram dose for that  
10 population.

11 Q. And, Doctor, do you have an understanding based on your  
12 review of the medical records that while Mrs. Knight was on  
13 Pradaxa, that she had her kidney function monitored by her  
14 doctors?

15 A. This is certainly what appears to me.

16 Q. Okay.

17 A. There are a number of measurements of kidney function over  
18 time.

19 MS. JONES: Could I have just one moment, Your Honor?

20 THE COURT: I'm sorry?

21 MS. JONES: Could I just have one moment?

22 THE COURT: Yes.

23 (Defense counsel conferring.)

24 MS. JONES: Dr. Crossley, the jury has seen the  
25 labeling for Pradaxa now over the course of the last two and a

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1 half weeks or so. I'm not going to walk through all of that  
2 with you.

3 Q. But I did want to ask you, as a clinician, have you had  
4 the opportunity to review the labeling for the medicine  
5 Pradaxa?

6 A. I have.

7 Q. Okay. And is that routine for you, that you review the  
8 labels for medicines that you prescribe?

9 A. It is.

10 Q. And tell us why that is.

11 A. Well, I think that is our sort of official documentation  
12 that is codified by the U.S. Food and Drug Administration that  
13 guides physicians on how to use drugs.

14 I must say that before my time chairing the pharmacy and  
15 therapeutics committee, I was probably not rigorous enough  
16 about reading that. But I certainly have been since that  
17 time, which is back in the mid 2000s.

18 Q. And in your experience, is it common or routine that  
19 labels for medicines might change, that the contents of a  
20 label might change or be updated?

21 A. Sure.

22 Q. Is that an unusual thing in your experience?

23 A. Not at all.

24 Q. And how, as a doctor, do you keep up with those types of  
25 changes?

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1 A. Well, we -- you know, the way that we typically find out  
2 about them is in our conferences in Vanderbilt. I mean, we --  
3 in most of the world, you probably get handed a new label by  
4 the drug rep. And we -- actually at Vanderbilt, we don't have  
5 drug reps in our clinic or in our area, and so we typically go  
6 over this in our -- in our cardiology conferences.

7 Q. And is it your --

8 A. And -- let me say and reading in journals, because the  
9 journals are -- the things that create label changes are  
10 typically in journals, you know, a year ahead of time.

11 Q. Is it also the case that the label for Pradaxa and for  
12 other medicines includes a section entitled Recent Major  
13 Changes? Are you familiar with that?

14 A. That's correct.

15 When you open a label and look at a label in the PDR or in  
16 an individual label, there is a section right at the top that  
17 says Recent Major Changes that draws you right to anything  
18 that is new. And then as you go through the label, you can  
19 see these bars drawn on the side to draw your attention to the  
20 changes.

21 MS. JONES: And just to give the jury a chance to see  
22 what we're talking about, could we pull up Exhibit 5884,  
23 please, Mr. Reynolds?

24 Q. Dr. Crossley, do you recognize Exhibit 5884?

25 A. I do.



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1 Q. Okay. And just so we're clear about what we're looking  
2 at, this is the first page of the Pradaxa label for January of  
3 2012; is that right?

4 A. That is, yes.

5 Q. And do you see on the left-hand side, right under the  
6 heading or highlights, there's a section entitled Recent Major  
7 Changes?

8 A. I do.

9 Q. And what is your understanding of what that section  
10 includes?

11 A. It includes a description under dosing administrations and  
12 warnings and precautions that are new.

13 Q. And so what is -- what is that that appears in those  
14 parentheses that we see in that same section?

15 A. Those are the sections to draw your attention to in the  
16 label.

17 Q. Okay. So --

18 A. All of the sections are numbered.

19 Q. So, for example, if we look at this recent major change  
20 reference for dosage and administration, if we turn to page 2  
21 of 5884, do you see that section entitled 2.2, Dosing  
22 Adjustments?

23 A. I do.

24 Q. And do you see that line on the left-hand side?

25 A. I do.

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1 Q. What do you understand that to be?

2 A. That's the line I referred to that indicates that there is  
3 change in that paragraph or those paragraphs.

4 Q. And so that corresponds with that information on the very  
5 first page of the label about changes in the label?

6 A. It does.

7 Q. Dr. Crossley, just to round out one issue, I'm going to  
8 ask you to turn to Exhibit 2000C, please, in your binder.

9 A. 2000 what?

10 Q. C like cat.

11 A. I am there.

12 Q. Okay. And do you recognize this as a collection of lab  
13 readings for Mrs. Knight including some of her kidney function  
14 readings over time?

15 A. I do.

16 MS. JONES: Your Honor, we would move for the  
17 admission of Exhibit 2000C.

18 THE COURT: Any objection?

19 MR. CHILDERS: No objection, Your Honor.

20 THE COURT: It's admitted.

21 (DEFENDANT'S EXHIBIT 2000C ADMITTED INTO EVIDENCE.)

22 MS. JONES: And just to give an example of what we're  
23 looking at here, if we go to page 2043 of Exhibit 2000C --  
24 sorry -- 2403, I apologize.

25 THE WITNESS: Yes.

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1 MS. JONES: You see that there are various -- 2000C,  
2 Mr. Reynolds. 2000 with a C at the end, 2403. That's 2043.  
3 2403, please.

4 And so just to look at this very quickly, you see that  
5 there is a series of measurements taken for Mrs. Knight  
6 including, for example, her creatinine levels.

7 Q. Do you see that?

8 A. I do.

9 Q. And that's a measure that they sometimes will evaluate to  
10 evaluate someone's kidney function?

11 A. That's correct.

12 Q. Okay. And throughout the balance of this record, there  
13 are various readings of laboratory values taken by Mrs.  
14 Knight's doctors, correct?

15 A. That's correct.

16 Q. And if you turn, for example, to 2431 in that same  
17 exhibit, you see down at the bottom of the page there is a  
18 reference to the GFR estimate?

19 A. I do.

20 Q. And then there are references there to the numerical  
21 values assigned if you're African American or non-African  
22 American.

23 Do you see that?

24 A. I do.

25 Q. And do you understand that to be an example of Mrs.

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1 Knight's doctors evaluating her kidney function at this point  
2 in time in February of 2012?

3 A. I do.

4 Q. Okay.

5 MS. JONES: We can take that down. Thank you,  
6 Mr. Reynolds.

7 Q. Dr. Crossley, based on your -- and, again, I don't want to  
8 march us through the label again. But based on your  
9 opportunity to review the contents of the Pradaxa label,  
10 including the Medication Guide, do you have an opinion as a  
11 clinician about whether or not the contents of that label are  
12 adequate and reasonable?

13 A. Certainly appears to be to me.

14 Q. Okay. And that's based on 30 or so years of reading drug  
15 labels and treating patients?

16 A. That's correct.

17 Q. Okay. Let me ask you this.

18 When you're treating a patient for any medication, do you  
19 typically talk to them about the Medication Guide at all?

20 A. I tell them that they're going to get the Medication  
21 Guide. They actually get it twice from us. They get it once  
22 from our computer system, which is not exactly the Medication  
23 Guide. It's a contracted service that gives you something  
24 that is sort of a digest of the Medication Guide. And then  
25 when they pick it up at the pharmacy, they get the Medication

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1 Guide.

2 Q. Okay. I want to ask you about one topic --

3 A. But I do not -- I would never rely on that being the only  
4 communication with a patient about a drug.

5 Q. Okay. And tell me what you mean by that.

6 A. I mean, as I said before, I'll sit down and have a serious  
7 shared decision-making discussion about any drug that has  
8 significant risk.

9 Q. Including oral anticoagulants?

10 A. Absolutely.

11 Q. And that would include warfarin or Pradaxa or Xarelto or  
12 Eliquis?

13 A. Yes.

14 Q. Okay. I wanted to ask you about one specific topic  
15 related to the label, and again that is 5884 in your binder.

16 And on the first page -- can we call that up, please,  
17 Mr. Reynolds -- there's a section entitled Drug Interactions.

18 Do you see that?

19 A. I do.

20 Q. And the third bullet in that section refers to P-gp  
21 inhibitors in patients with severe renal impairment.

22 Do you see that?

23 A. I do.

24 Q. Do you understand that Mrs. Knight was a patient who fell  
25 into the category of persons having severe renal impairment?

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1 A. I do.

2 Q. Okay. And it says Pradaxa use not recommended in that  
3 section of Drug Interactions.

4 Just to take a step back very briefly, what is a P-gp  
5 inhibitor?

6 A. P-gp is a -- is called -- the name is permeability  
7 glycoprotein. And it's a -- it's a molecule that helps get  
8 the drug across the membranes in your gut and into your  
9 kidney. It is -- when it's inhibited, then the drug -- a P-gp  
10 inhibitor -- an inhibitor of that protein will make the drug  
11 levels increase. A facilitator of that molecule will make the  
12 drug levels decrease.

13 And so that -- so Pradaxa is an example of a drug that is  
14 affected by P-gp inhibitors.

15 Q. And, in fact, the label specifically says that for  
16 patients who have severe renal impairment, Pradaxa use is not  
17 necessarily recommended; is that correct?

18 A. Correct.

19 Q. Okay.

20 A. Yeah.

21 Q. Now, based on your review of the records, was Mrs. Knight  
22 on a P-gp inhibitor called Coreg?

23 A. She was.

24 Q. Okay. And what is Coreg prescribed for?

25 A. So Coreg is a beta blocker, and it's prescribed in Mrs.

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1 Knight to help for three reasons really. One is to help  
2 control the heart rate and atrial fibrillation. One is to  
3 help control the ischemia or the effect of poor blood flow to  
4 her heart on her heart. And then it's also -- it also can be  
5 helpful generally just in higher doses for high blood  
6 pressure.

7 Q. How many P-gp inhibitors are there? Do you have a sense?

8 A. So when you read about P-gp inhibitors, it's a big mess.  
9 I mean, there's a whole lot.

10 I mean, if you just search for a list of P-gp inhibitors,  
11 it includes things like citrus fruit and lots of dietary  
12 supplements and foods and stuff, and it includes a good number  
13 of drugs. And some drugs are considered to be major P-gp  
14 inhibitors, and some drugs are considered to be less  
15 significant P-gp inhibitors.

16 Q. Let me ask you this.

17 In your experience as a clinician and someone who is  
18 active in the research community for cardiovascular medicines,  
19 have you ever seen any data to suggest that Coreg increases  
20 exposure levels in Pradaxa patients?

21 A. I haven't seen direct data about that, just the data that  
22 says it's a P-gp inhibitor.

23 Q. Okay. And do you have an understanding of what dose of  
24 Coreg Mrs. Knight was on?

25 A. So most of the record reflects that Mrs. Knight took 3.125

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1 milligrams of Coreg twice per day. Some places in the record  
2 suggest that she was on 3.125 milligrams once a day.

3 Coreg is a drug that we try to dose -- it's a funny drug,  
4 and you can't start at the target dose. For most of the other  
5 beta blockers, you start at whatever dose you think they're  
6 going -- they're going to need. For Coreg, we have to start  
7 at this new low test dose, and that is what the 3.125  
8 milligrams is. It's -- 3.125 is not really intended to ever  
9 be a long-term dose for an adult of Coreg. That's a tiny  
10 little dose.

11 And so typically what we would do is start at 3.125  
12 milligrams and take that for about a week; double that to  
13 6.25; double that to 12; and then double that to 25. And then  
14 if we're treating high blood pressure, double it again to 50  
15 milligrams a day.

16 So the target dose for Coreg is 25 milligrams per day if  
17 you are treating AFib or ischemia, and 50 milligrams -- I said  
18 per day. 25 milligrams twice per day if you're treating the  
19 usual things, AFib or coronary artery disease, and then 50  
20 milligrams twice a day if you're treating high blood pressure.

21 And she was only on 3.125 milligrams. That's a very, very  
22 tiny dose.

23 Q. So given what you've said about the dose of Coreg and in  
24 light of what the label includes on the topic of using P-gp  
25 inhibitors in patients with severe renal impairment, do you



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1 have an opinion or a perspective on the reasonableness of her  
2 doctors' decisions to have her on both Pradaxa and Coreg?

3 A. I think it's quite reasonable. I think there -- the  
4 record doesn't reflect why the dose of Coreg was limited so  
5 much. And I'd have to infer that she didn't tolerate  
6 metoprolol or other drugs because she was on such a tiny dose  
7 of a beta blocker.

8 And I think, you know, on such a low dose, I cannot  
9 imagine having a big increase in the level. And if you were  
10 worried about that increase in the level, what you would do is  
11 pick a lower dose of the drug, and that's exactly what they  
12 did. They picked the lowest dose of Pradaxa there is, the 75  
13 milligrams twice per day.

14 MR. JONES: Let me just ask you a general question --  
15 we can take that down. Thank you, Mr. Reynolds.

16 Let me just ask you a general question, again not  
17 wanting to rehash all of the records the jury has seen  
18 already.

19 Q. Based on having reviewed the records and having had a  
20 chance to review the testimony of Mrs. Knight's doctors, do  
21 you have an opinion on how she did while she was on Pradaxa,  
22 how she did on the medicine?

23 A. She -- number one, she didn't have another stroke, which  
24 is almost miraculous given her stroke risk. And she also  
25 didn't have a bleeding problem when she was on Pradaxa alone.

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1 She was on Pradaxa from 2011, I guess, to 2013 if I  
2 remember correctly. And then she had -- she had a stenting  
3 procedure and had to be on triple therapy for a while. And  
4 while she was on triple therapy, she had bleeding  
5 complication -- she had bleeding.

6 And then after that bleeding event, when she recovered  
7 from the bleeding event, she was on Pradaxa again and didn't  
8 bleed -- didn't have any more GI bleeding again.

9 Q. Let me ask you another question.

10 One of the things that the jury has heard some about is  
11 this idea of whether or not Pradaxa also requires blood  
12 monitoring.

13 Are you familiar with those discussions in the scientific  
14 community?

15 A. I am.

16 Q. And is that a discussion that has happened with respect to  
17 Pradaxa and the other NOACs, Xarelto and Eliquis?

18 A. That's correct.

19 Q. Do you have a view in your clinical practice, as a  
20 clinician and a researcher, whether the existence of blood  
21 monitoring for medicines like Pradaxa, Xarelto and Eliquis  
22 would improve the care of your patients as you see them every  
23 day?

24 A. So Pradaxa -- all of those drugs were studied in  
25 gargantuan trials. I mean, 18,000 patients in the Pradaxa

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1 study. And it was studied using clinical factors to guide  
2 therapy, and that is their -- how much -- what their renal  
3 function is, how old they are, things like that to guide how  
4 much Pradaxa to give them.

5 And in that trial, that strategy showed significant  
6 benefit over warfarin. It showed a little bit more bleeding,  
7 but tremendous benefit in terms of stroke risk over -- over  
8 warfarin.

9 And to go to a strategy where we have to measure the level  
10 of the drug in the body is a very difficult thing. I mean,  
11 the technology to do that right now is mass spectroscopy,  
12 which is something that can be done, but it takes a long time  
13 to do, and it's very expensive. And if you look at the  
14 breadth of drugs that we give, nowhere near 1 percent of drug  
15 are measured, drug levels are measured by any -- by any  
16 method.

17 I think there are a couple of articles in the literature  
18 where -- where the American College of Cardiology and others  
19 got together a think tank to think about this and see if they  
20 could create something that would help this and create a  
21 monitoring that might be beneficial. And the concept that  
22 came out of it was it would be nice if we had a clot function  
23 assay that would be helpful for these drugs the way the INR  
24 test is for coumadin.

25 I mean, we don't measure the level of coumadin in the

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1 body. We can measure it. It takes about three or four weeks  
2 to get it back. The only time I've ever seen that done is in  
3 a coumadin overdose. It was frankly done when my dog was  
4 poisoned by a wayward soul, and that is the only experience I  
5 have with measuring it honestly.

6 But what we do measure with coumadin is the effect of the  
7 coumadin on the clotting. And there is -- we don't have a  
8 perfect test for that with Pradaxa or any of the other new  
9 novel agents.

10 And that was really the outcome of this conference, was  
11 sort of an arm waving, hey, it would be good if we had a way,  
12 but we don't have a way, and sort of an agreement that we  
13 can't measure the drug level.

14 Q. In your clinical practice, do you have any reason to think  
15 that measuring blood levels would improve the efficacy or the  
16 safety of these medicines that you're using?

17 A. I don't have any reason.

18 Q. And what about with Mrs. Knight specifically? Having had  
19 a chance to review her medical records and the testimony of  
20 her doctors, do you have any reason to think that had her  
21 blood levels on Pradaxa been monitored, that something  
22 different might have happened with her?

23 A. I certainly don't.

24 I mean, I don't -- I don't think there's any evidence that  
25 Mrs. Knight had too much Pradaxa in her system. She was on a

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1 low dose of the drug. She tolerated the drug well. She did  
2 not bleed when she was taking the Pradaxa alone. She only  
3 bled when she was given Pradaxa plus the two other blood  
4 thinners. And then when she recovered from that, when she was  
5 put back on Pradaxa, she didn't bleed again. So I don't think  
6 there's any clinical evidence that that was part of what  
7 happened in Ms. Knight.

8 Q. Dr. Crossley, I want to just kind of wrap up by talking  
9 about Mrs. Knight's condition in 2013 -- excuse me -- late  
10 2012 and 2013, if we could.

11 Did you see evidence in the records that over time Mrs.  
12 Knight's coronary artery disease became worse or progressed?

13 A. Certainly.

14 Q. I'm going to ask you to turn to 9004A in your binder.

15 Are you there, Doctor?

16 A. I am.

17 Q. Okay.

18 MS. JONES: Your Honor, we would move --

19 Q. And do you recognize that exhibit as medical records for  
20 Mrs. Knight?

21 A. I do.

22 MS. JONES: Your Honor, we would move for the  
23 admission of 9004A into evidence.

24 THE COURT: Any objection?

25 MR. CHILDERS: No, sir.

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1 THE COURT: It's admitted.

2 (DEFENDANT'S EXHIBIT 9004A ADMITTED INTO EVIDENCE.)

3 MS. JONES: Okay. Page 6. Mr. Reynolds always has to  
4 remind me to give him a page number. That's my fault, not his  
5 fault, just so everyone knows.

6 Okay. Actually, I'm sorry, can we go to page -- yeah,  
7 page 6. Okay.

8 Q. Up at the top of the page, do you see there's a reference  
9 there to a visit with Dr. Skuli Gunnalaugsson in November of  
10 2012?

11 A. I do.

12 Q. Okay. And Dr. Gunnalaugsson, again, was Mrs. Knight's  
13 cardiologist; is that right?

14 A. That's correct.

15 Q. Okay. And in the section entitled History of Present  
16 Illness, it says: Betty Knight is an 83-year-old woman with a  
17 history of mild ischemic cardiomyopathy, status post  
18 multi-vessel stenting in the past as well as dextrocardia, who  
19 has not been feeling well lately.

20 Did I read that correctly?

21 A. That's correct.

22 Q. And just very briefly, what is going on here with Mrs.  
23 Knight in November of 2012?

24 A. Well, he describes having struggled with her drugs and  
25 just said that she was having generalized symptoms of feeling

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1 poorly.

2 Q. Okay. And it goes on here to say: She has been  
3 complaining about fatigue and shortness of breath as well as  
4 orthopnea.

5 Tell us what orthopnea is.

6 A. So what orthopnea is is when you lay down flat, you get  
7 short of breath, and it's usually caused by congestive heart  
8 failure where your heart is not pumping well enough. And so  
9 you lay out flat, there is more pressure in your lungs, and so  
10 people have to sit up to breathe.

11 Q. Okay. And if we scroll down, you can see there's a  
12 listing here of Mrs. Knight's past medical history.

13 Do you see that?

14 A. I do.

15 Q. And so, for example, it mentions ischemic cardiomyopathy.

16 Do you see that?

17 A. I do.

18 Q. And is that consistent with her coronary artery disease?

19 A. It is.

20 Q. And then there's a reference to her atrial fibrillation.

21 Do you see that?

22 A. I do.

23 Q. And there is a reference to her chronicle -- excuse me --  
24 her chronic renal insufficiency.

25 Do you see that?

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1 A. Yes.

2 Q. Then No. 10 on the list is statin intolerance.

3 Is that what you were mentioning earlier, that she had a  
4 hard time taking statins?

5 A. It is.

6 Q. Okay.

7 A. So the other drugs, like the Welchol that you mentioned,  
8 are really weak sisters when it comes to statins. Statins are  
9 really effective at lowering cholesterol in most people, not  
10 in everyone, but in most people. And if you can tolerate  
11 them, you will certainly live longer with coronary disease.

12 But she -- unfortunately she couldn't.

13 Q. And if we scroll further down on that same page, there is  
14 a section called Assessment Plan.

15 A. Yes.

16 Q. Do you see that?

17 A. I do.

18 Q. And the very first sentence says: 83-year-old woman with  
19 a history of coronary artery disease with mild ischemic  
20 cardiomyopathy with symptomatology suggestive for  
21 decompensated congestive heart failure.

22 Tell us what that means, Dr. Crossley.

23 A. It means the same thing that the introduction means, is  
24 she was having shortness of breath, especially the shortness  
25 of breath lying down, and the fatigue and the feeling badly



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1 and all of that.

2 Q. And would that be consistent with coronary artery disease?

3 A. It is.

4 Q. Okay. Is there any reference in this record to problems  
5 with Pradaxa or issues with Pradaxa?

6 A. I don't see any.

7 Q. Okay. I'm going to ask you to turn now to Exhibit 9008A.

8 A. I'm there.

9 Q. And we're going to page 2 of that exhibit, if we could,  
10 please.

11 A. I am there.

12 Q. Doctor, do you recognize that record at page 2 of 9008A?

13 A. Yes.

14 Q. Okay. Do you recognize --

15 A. I think this is a home visit record.

16 Q. Okay.

17 MS. JONES: Your Honor, we would move for the  
18 admission of 9008A.

19 THE COURT: Any objection?

20 MR. CHILDERS: No objection.

21 THE COURT: It's admitted.

22 MS. JONES: Thank you, Your Honor.

23 (DEFENDANT'S EXHIBIT 9008A ADMITTED INTO EVIDENCE.)

24 BY MS. JONES:

25 Q. Dr. Crossley, up at the top of the page, do you see

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1 there's a reference to DOS or date of service of April 10,  
2 2013?

3 A. I do.

4 Q. Okay. And on the left-hand side we can see Mrs. Knight's  
5 name up at the top?

6 A. I see that.

7 Q. Then there's a reference to a line that starts with CC and  
8 a colon.

9 Do you see that?

10 A. Yes.

11 Q. And what's the -- that's chief complaint; is that right?

12 A. That's correct.

13 Q. And what was the chief complaint as of April 10, 2013?

14 A. Chest discomfort.

15 Q. Okay. And then there is a section slightly further down  
16 where it says: Provider home visit is medically reasonable  
17 and necessary in lieu of the office visit because.

18 Do you see that?

19 A. Yes.

20 Q. And is that a reference to the fact that you understood  
21 this to be a visit of a health care professional to Mrs.  
22 Knight's home?

23 A. That's my understanding.

24 Q. All right. And then it references as the reason, that  
25 circle there, tasking to get out.

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1 Do you see that?

2 A. I do.

3 Q. Okay. And then in the handwritten notation, it says:

4 Generally, and then there's a zero with an X through it, feel  
5 good times two weeks.

6 Do you have an understanding of what that means?

7 A. I think it means she feels badly, and she has for a couple  
8 of weeks.

9 Q. Okay. And it goes on to say: Breathing is bad. Feel bad  
10 in my chest. Having some CP, goes to armpit at times.

11 Do you see that?

12 A. I do.

13 Q. And would that be consistent with Mrs. Knight's coronary  
14 artery disease?

15 A. I certainly think it is.

16 Q. Okay. And then it goes on to say: Sleeping more, naps  
17 daily around noon. And then it says: Thinks abdomen is  
18 swollen, says it's sore.

19 A. Yes.

20 Q. What do you understand that to be a reference to given  
21 what you know about Mrs. Knight's medical --

22 A. So Mrs. Knight had bad heart failure. And, you know, if  
23 we're standing up or sitting up all the time, then the heart  
24 failure often makes your legs swell. If you spend a good bit  
25 of time in bed, or if your heart failure gets really bad, that

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1 swelling often happens in your liver rather than in your legs.

2 I think there is lots of records on Mrs. Knight to show  
3 that her legs swelled from time to time, but this sounds like  
4 it's liver -- what we call passive congestion of the liver or  
5 swelling of the liver because of heart failure. It's a very  
6 common thing in people like Mrs. Knight.

7 Q. And in this record, is there any mention at all of any  
8 issues with Pradaxa or concerns about how she was doing on  
9 Pradaxa?

10 A. I don't see any.

11 MS. JONES: We can take that down. Thank you, Mr.  
12 Reynolds.

13 Dr. Crossley, the jury has heard that in April of  
14 2013, Mrs. Knight had a heart attack.

15 Q. Are you familiar with that fact in her records?

16 A. I am.

17 Q. Okay. I'm going to ask you to go back to 9003B, which I  
18 believe is now admitted, and go to page 20, please.

19 And up at the top of that page, you see the reference to  
20 Mrs. Knight's name, then the date of admission of April 2013?

21 A. I --

22 Q. April 17, 2013?

23 A. I do.

24 Q. Then do you also see the date of discharge of April 24,  
25 2013?

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1 A. I do.

2 Q. Okay. And if we scroll down under the listing of  
3 Discharge Diagnoses, there's a reference to non-ST elevated  
4 myocardial infarction, status post left heart catheterization  
5 with two stents placed.

6 A. Correct.

7 Q. Tell us what that means.

8 A. That means she had another procedure much as what I  
9 described earlier.

10 Q. Okay. And that was after --

11 A. And that means she came in with a heart attack, with that  
12 non-ST elevation kind of heart attack.

13 Q. Okay. And let's look at the next page in this record if  
14 we could, page 21. And we're going to just call out the  
15 hospital course, please.

16 It says: The patient is an 83-year-old female who  
17 presented to St. Mary's Medical Center emergency department on  
18 April 17, 2013, with a complaint of chest pain.

19 It goes on to say: The patient's troponin levels were  
20 initially found to be elevated at 2.69.

21 Now the jury has heard a little bit about troponin. In  
22 your experience as a cardiologist and treating patients who  
23 present with a heart attack, what does a troponin level of  
24 2.69 mean?

25 A. Well, in a patient who comes to the hospital with chest

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1 discomfort, or symptoms sounding like heart disease like she  
2 did, and has a troponin level of that magnitude and doesn't  
3 have any EKG that glares that there's a heart attack, it means  
4 that they have had what we call a non-Q wave myocardial  
5 infarction.

6 That means an ST-segment elevation heart attack. So she  
7 did not have -- there's no mention of her having that, and  
8 there was mention of all of the other diagnostic criteria for  
9 a non-ST elevation MI.

10 Q. Okay. And that's the type of heart attack you described  
11 where there is blockage throughout the vessels?

12 A. Correct.

13 Q. Okay. About midway down that paragraph, it says: While  
14 in the emergency department, the patient was seen by Dr. Maru,  
15 who discontinued Pradaxa. A left heart catheterization was  
16 then planned for 72 hours after the discontinuation of  
17 Pradaxa.

18 Now, would that be a routine thing for a doctor to do, to  
19 stop an anticoagulant before doing a catheter procedure?

20 A. That's correct. We no longer wait that long, but that was  
21 common practice at the time.

22 Q. Okay. At the end of the page there, it says: The patient  
23 did remain stable over the next few days and underwent the  
24 left heart catheterization on April 22nd, 2013, as scheduled.

25 Do you see that?

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1 A. I do.

2 Q. And so is that a reference to the fact that Mrs. Knight  
3 actually had another one of those procedures that you  
4 described when we were looking at the board earlier?

5 A. That's correct.

6 Q. Okay. Doctor, I'm going to ask you to turn in your binder  
7 to Exhibit 9007B just to look at the report from that study.  
8 We are going to go to page 94, and I believe this is already  
9 in evidence.

10 Do you recognize that medical record at page 94, Doctor?

11 A. I do.

12 Q. Okay. And just to reference the top part of the page, you  
13 see there is Mrs. Knight's name in the upper left-hand corner?

14 A. I do.

15 Q. Okay. And then a little further down, there's the date of  
16 the examination, right under final report.

17 Do you see that?

18 A. I do.

19 Q. Okay. And so tell the jury, again just generally is fine,  
20 what her doctors did when she presented with a heart attack in  
21 April of 2013.

22 A. They did exactly the same thing I described before. They  
23 put a catheter in her wrist or her leg, passed it to her  
24 heart, took pictures of the blockages, and then -- and then  
25 put stents in where they were.

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1 Q. Okay. Let's --

2 A. I believe there were two stents placed.

3 Q. Let's go to page 95 --

4 A. Yeah.

5 Q. -- the Findings section.

6 Do you see that, Doctor?

7 A. I do.

8 Q. Okay. And so what did they do based on this description  
9 here?

10 A. So they identified that her ejection fraction had fallen  
11 from the 40 percent it was before to 30 or 40 percent now, and  
12 it's very common to get a range in ejection fraction.

13 And then they identified scattered narrowing areas. Her  
14 left anterior descending, where that stent had been placed the  
15 first time, was at 20 to 30 percent. Her circumflex artery,  
16 where it had previously had a relatively minor blockage, now  
17 has a 90- to 95-percent stenosis. And then the right coronary  
18 had 30- to 40-percent stenosis in it.

19 And then they placed the stents. The first one was in the  
20 left circumflex artery. They put a two-millimeter stent in  
21 there. And then they put a second stent in there that they  
22 dilated up to 3.5 millimeters to open up that very tight area.

23 Q. So she had two additional stents placed in 2013; is that  
24 correct?

25 A. That's correct.



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1 Q. Okay. And I want to ask you to look at Exhibit 9005B also  
2 in your binder. We're going to go to page 8, please.

3 Dr. Crossley, do you recognize this as a further medical  
4 record for Mrs. Knight from 2013?

5 A. I do.

6 Q. Okay.

7 MS. JONES: Your Honor, we would move for the  
8 admission of 9005B.

9 THE COURT: Any objection?

10 MR. CHILDERS: No objection.

11 THE COURT: It's admitted.

12 (DEFENDANT'S EXHIBIT 9005B ADMITTED INTO EVIDENCE.)

13 MS. JONES: Okay.

14 Q. Dr. Crossley, very quickly up at the top, you see there's  
15 a reference to May of 2013.

16 Do you see that?

17 A. I do.

18 Q. And this record actually documents a return visit with Dr.  
19 Gunnalaugsson, Mrs. Knight's cardiologist, correct?

20 A. That's correct.

21 Q. And the part I wanted to ask you about is down at the  
22 bottom of the page. There is a section called Assessment and  
23 Plan.

24 Do you see that?

25 A. Yes.

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1 Q. And it says: This is an 83-year-old woman with a history  
2 of multiple medical problems. She had successful angioplasty  
3 on two vessels two weeks ago by Dr. Maru.

4 Is that just a reference to the stent procedure that she  
5 had?

6 A. That's correct.

7 Q. Okay. And then it goes on to say these were new stenoses.  
8 You see that?

9 A. Yes.

10 Q. What does that mean?

11 A. That means these were not blockages. These were different  
12 from lesions that were seen in her previous heart cath.

13 Q. So that was in addition to what you drew up on the board  
14 earlier?

15 A. That's correct.

16 Q. Okay.

17 MS. JONES: We can take that down. Thank you,  
18 Mr. Reynolds.

19 Q. Doctor, as part of your clinical practice, have you had  
20 occasion to have to place stents for patients who have  
21 coronary artery disease?

22 A. I don't place the stents, but I certainly have had many --  
23 I have my colleagues, who are plumbers -- we divide  
24 cardiologists into plumbers and electricians. I'm an  
25 electrician, so I get the plumbers to place stents on many of

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1 my patients.

2 Q. Okay. And are the plumbers the interventional  
3 cardiologists?

4 A. That's correct.

5 Q. Okay. Got it.

6 Given your experience with patients having that procedure,  
7 do you have any concerns or questions about how Mrs. Knight's  
8 doctors went about treating her in April of 2013 when she  
9 presented with a heart attack?

10 A. It looks perfect to me.

11 Q. Okay. Is it your understanding that after Mrs. Knight  
12 presented with a heart attack in April of 2013, that she was  
13 put on what the jury has now heard referred to a number of  
14 times as triple therapy, aspirin, Plavix and Pradaxa?

15 A. That is my understanding.

16 Q. Okay. And do you have experience with patients who are on  
17 what is known as triple therapy?

18 A. Yes, I do.

19 Q. And is your experience something that includes patients  
20 who are on warfarin as the anticoagulant or Pradaxa or Xarelto  
21 or Eliquis?

22 A. All of the above.

23 Q. Okay. Do you have a sense of, you know, how many patients  
24 over the years you've treated who have required triple  
25 therapy?

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1 A. A lot. Hundreds.

2 Q. Okay. And just so the jury understands from the  
3 perspective of a cardiology clinician, why is it that patients  
4 have to be on all three of those types of medicines at the  
5 same time after they've had a stent placed?

6 A. So the Plavix and aspirin are to inhibit the platelets.  
7 Either drug alone is not enough. Through big clinical trials  
8 it was found that you needed to -- you needed to inhibit the  
9 platelets sticking to the stent with both Plavix and aspirin.

10 On the flip side, the chemical anticoagulant, in this case  
11 Pradaxa, or previously when she was on warfarin, is there to  
12 prevent strokes in atrial fibrillation. We know from big  
13 clinical trials that Plavix and aspirin alone do a really bad  
14 job of preventing strokes in atrial fibrillation.

15 Q. And, again, just based on your clinical experience and  
16 having had a chance to see Mrs. Knight's medical records, do  
17 you have any concerns or issues with the way Mrs. Knight's  
18 doctors proceeded in placing her on triple therapy in April of  
19 2013?

20 A. I don't. We have to do this all the time, and it's always  
21 a rock and a hard place issue, especially in somebody who has  
22 a history of blood loss in the past.

23 Q. And is that because the combination of those medicines can  
24 increase the risk of bleeding?

25 A. That's right. The combination is a real mess for

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1 increasing bleed risk.

2 Q. And is that something you discuss with your patients  
3 before they're placed on triple therapy?

4 A. Absolutely. And I think her record suggests that that  
5 discussion was held.

6 Q. And do you have experience with patients who have been on  
7 triple therapy where the anticoagulant medicine was warfarin,  
8 and they had a bleed?

9 A. Sure.

10 Q. Have you seen that with patients who were on triple  
11 therapy with Pradaxa?

12 A. Yes.

13 Q. What about with Xarelto and Eliquis?

14 A. Absolutely.

15 Q. Can a bleed happen no matter which of the oral  
16 anticoagulants --

17 A. Correct.

18 Q. -- is a third part of that triple therapy?

19 A. That is correct.

20 Q. Doctor, I'm going to ask you to turn in your binder to  
21 5431 if you would, please.

22 Are you there, Doctor?

23 A. I am.

24 Q. Do you recognize 5431?

25 A. I do.

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1 Q. Just in general, what is 5431?

2 A. It's a report of the patients in the RE-LY study who had  
3 triple therapy.

4 Q. Okay. As part of forming your opinions in this case, is  
5 this an article that you reviewed and relied upon?

6 A. That's correct.

7 MS. JONES: Your Honor, we would move for at least the  
8 permission to publish 5431 subject to our earlier --

9 THE COURT: As a learned treatise?

10 MS. JONES: As a learned treatise.

11 THE COURT: You may proceed.

12 MS. JONES: Okay.

13 Q. Doctor, up at the top of the page here, there is a title  
14 of an article called Concomitant Use of Antiplatelet Therapy  
15 with Dabigatran or Warfarin in the Randomized Evaluation of  
16 Long-Term Anticoagulation Therapy Trial.

17 A. Correct.

18 Q. That's a long title. What does that mean?

19 A. Just what I said before. In patients that were in the  
20 RE-LY study who were on dabigatran or warfarin, who also had  
21 to be put on triple therapy during the study, reporting the  
22 results from that.

23 Q. And if you look at the authors on the paper, do you see  
24 that some of them are folks who work at Boehringer Ingelheim;  
25 for example, Dr. Paul Reilly on the third line?

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1 A. Yes.

2 Q. And do you recognize some of them as scientists and  
3 doctors who are affiliated with institutions, outside  
4 institutions?

5 A. Correct.

6 Q. Okay. I'm going to ask you to flip, if you would, to page  
7 2 of 5431. And there is a paragraph that begins with a common  
8 clinical dilemma.

9 Do you see that?

10 A. I do.

11 Q. It says: A common clinical dilemma regarding treatment of  
12 patients with AF is the need to use concomitant antiplatelets  
13 for a variety of reasons.

14 And before we get into what the actual reasons are, what  
15 is that statement saying?

16 A. Just what we've talked about, the need to use antiplatelet  
17 therapy along with systemic anticoagulation.

18 Q. Okay. Medicines like warfarin and Pradaxa?

19 A. Right.

20 Q. And then it describes some of the circumstances where that  
21 might be necessary: For primary prevention of coronary artery  
22 disease; for secondary prevention after a diagnosis of  
23 coronary disease; or for maintenance therapy after  
24 percutaneous coronary intervention.

25 Did I read that correctly?

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1 A. You did.

2 Q. And into which of those three categories did Ms. Knight  
3 fall?

4 A. All of them actually. But the compelling reason is the  
5 prevention after a stent, and that's what the majority of  
6 these were.

7 Q. And that's that reference to maintenance therapy after  
8 percutaneous coronary intervention?

9 A. That's correct.

10 Q. Okay. It goes on to say: In some of these situations,  
11 dual antiplatelet therapy may be used. For example, after an  
12 acute myocardial infarction or after percutaneous coronary  
13 intervention.

14 You see that, Doctor?

15 A. I do.

16 Q. And, again, that's the situation Mrs. Knight was in. She  
17 had had a heart attack, she had had a stent procedure, and  
18 then they needed to figure out how to treat her most safely,  
19 correct?

20 A. That's correct.

21 Q. All right. And then it goes on to say: Although the  
22 combination of oral anticoagulants and antiplatelets carry the  
23 potential of additive benefits, they also carry the danger of  
24 increased risk of bleeding.

25 Is that just what you were describing for the jury earlier



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1 in terms of that rock and a hard place situation?

2 A. It was.

3 Q. Okay. If you look at page 3 in that same article, you see  
4 there's a section called Results?

5 A. I do.

6 Q. And it actually describes the numbers of the patients who  
7 were in different categories in the analysis that they did.

8 And you see there's a reference there to 812 patients on  
9 both drugs?

10 A. I do.

11 Q. And do you see that -- do you understand that to be a  
12 reference to patients who were on triple therapy, patients who  
13 were on both aspirin and Plavix?

14 A. I do.

15 Q. Okay. I want to ask you about what the authors found when  
16 they actually looked at how people did on triple therapy with  
17 warfarin versus triple therapy with Pradaxa.

18 If you turn to page 4 of that same article, there's -- are  
19 you there?

20 A. I'm there.

21 Q. There's a paragraph that begins with: We also attempted  
22 to estimate the risk of bleeding according to the number of  
23 antiplatelets used, single or dual, and median dose for  
24 aspirin used.

25 Do you see that?

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1 A. I do.

2 Q. And that's just them trying to figure out do people have  
3 worse bleeding if they're on one antiplatelet or two  
4 antiplatelets; is that right?

5 A. That's correct.

6 Q. Okay. And it goes on to say: The risk of major  
7 bleeding -- the next sentence down. The risk of major  
8 bleeding seemed higher among patients who received dual  
9 antiplatelets than among patients who only received a single  
10 antiplatelet in all treatment groups.

11 Do you see that?

12 A. I do.

13 Q. And so what are they telling us there?

14 A. That dual antiplatelet therapy makes you bleed worse than  
15 single antiplatelet therapy along with the systemic  
16 anticoagulation.

17 Q. And that --

18 A. So if you're on warfarin plus Plavix, you're less likely  
19 to bleed than if you're on warfarin plus Plavix and aspirin.

20 Q. And did they say here that that was the case across all of  
21 the treatment groups, so people who were on Pradaxa 150 or  
22 people who were on warfarin?

23 A. Correct.

24 Q. Okay. And then down at the bottom of that same paragraph,  
25 it says: Again, the relative increases were consistent

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1 whether patients were on dabigatran 110, dabigatran 150 or  
2 warfarin, but the absolute risks were lowest on dabigatran  
3 110. Similar trends were seen with minor bleeding,  
4 extracranial bleeding, but not for intracranial bleeding  
5 probably because of the low event rate.

6 So we know that the 110 isn't approved in the U.S., but  
7 what is that telling us there about how dabigatran 150 on  
8 triple therapy compared to warfarin on triple therapy?

9 A. It was very similar.

10 Q. Okay. They didn't see a difference?

11 A. Correct.

12 MS. JONES: You can take that down. Thank you,  
13 Mr. Reynolds.

14 Dr. Crossley, there was one thing I just wanted to  
15 make sure I understood based on our discussions today.

16 Q. Is it your understanding that around the time that Mrs.  
17 Knight was prescribed triple therapy in April of 2013, that  
18 she actually had a different prescriber for her Pradaxa other  
19 than Dr. MacFarland who started it?

20 A. That's right. Yes, that is my understanding.

21 Q. Okay. And I'm going to ask you to look at Exhibit 9002.  
22 We're going to go to page 29.

23 Doctor, do you recognize Exhibit 9002 as a pharmacy record  
24 for Mrs. Knight?

25 A. I do.

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1 Q. Okay.

2 MS. JONES: And, Your Honor, we would move for the  
3 admission of 9002.

4 THE COURT: Any objection?

5 MR. CHILDERS: No objection.

6 THE COURT: It's admitted.

7 (DEFENDANT'S EXHIBIT 9002 ADMITTED INTO EVIDENCE.)

8 BY MS. JONES:

9 Q. So if we look at the bottom of the page here, you see  
10 there's a reference there to a prescription of Pradaxa  
11 75-milligram capsule.

12 Do you see that?

13 A. I do.

14 Q. And do you see the date of April 24th, 2013, right on the  
15 end of the line?

16 It's also on the electronic screen if that is easier.

17 A. Okay. Yes, I do.

18 Q. I know the type is teeny tiny.

19 And do you see --

20 A. Have sympathy on my old eyes.

21 Q. We do what we can.

22 Do you see that the prescriber's name is listed there?

23 A. I do.

24 Q. And do you see that the prescriber was someone named  
25 Stephanie Graham?

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1 A. I do.

2 Q. Okay. And so that was a prescriber decision that was made  
3 right around the time that Mrs. Knight had her myocardial  
4 infarction and was placed on triple therapy?

5 A. Correct.

6 MS. JONES: We can take that down. Thank you,  
7 Mr. Reynolds.

8 Dr. Crossley, the jury has now heard about the GI  
9 bleed that Mrs. Knight had in May of 2013, so we won't go  
10 through all of those records again with you.

11 Q. But do you have an understanding of what Mrs. Knight's  
12 doctors identified as the source of her bleed when they  
13 actually did a colonoscopy to check in May of 2013?

14 A. It was an area where -- what is called angiodysplasia,  
15 where you have a little network of little blood vessels that  
16 one of them broke open and was bleeding.

17 Q. Okay.

18 A. And they were fortunately able to put a clip on there and  
19 break it -- and stop the bleeding.

20 Q. And let me ask you this.

21 In your experience, if you have a problem in your colon  
22 that is prone to bleeding, and you're on Plavix and aspirin  
23 and any other oral anticoagulant, is your risk of bleeding  
24 from that source higher than it would normally be?

25 A. Absolutely.

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1 Q. And would that risk exist whether you're on Pradaxa or  
2 warfarin or Xarelto or Eliquis?

3 A. Correct.

4 Q. And so based on your review of the medical records for  
5 Mrs. Knight, are you able to rule out the possibility that had  
6 she been on warfarin with triple therapy in March -- in May of  
7 2013, that she would have had the same bleed? Are you able to  
8 rule that out?

9 A. No, of course not.

10 Q. Okay. And why do you say that?

11 A. Because, I mean, triple therapy -- she had a bleed. Those  
12 drugs do not make you bleed. Those drugs make you bleed more  
13 when there is something that is bleeding.

14 So those drugs together don't create that angiodysplasia  
15 or that area where that blood vessel was bleeding. But that  
16 angiodysplasia opening up and starting to ooze then is  
17 converted into a worse bleed by being on all of those blood  
18 thinners. And whether you're on warfarin or whether you're on  
19 Plavix or Xarelto or Eliquis, all of those can make you bleed.

20 Q. Okay. Do you have an understanding that after Mrs. Knight  
21 had her bleed, and she was in the hospital, that her doctors  
22 evaluated something known as the aPTT for her?

23 A. Yes.

24 Q. And can you just very briefly explain for the jury what  
25 the aPTT is?

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1 A. The aPTT is a test, that the routine use of that is for  
2 monitoring heparin, which is an IV blood thinner. We use it  
3 every day for that.

4 It can be used in Pradaxa in answering the question, is  
5 there some Pradaxa effect left there? It is not a great test  
6 for saying how much Pradaxa effect do I have. So, you know,  
7 it's not a substitute for the INR that we use in warfarin.

8 Q. And do you have an understanding based on looking at the  
9 records, that when her doctors checked her aPTT in May of 2013  
10 for Mrs. Knight, that it was elevated, that it was above the  
11 normal range?

12 A. It was.

13 Q. Is that something you would expect to see in a patient who  
14 is on an anticoagulant of any kind?

15 A. It -- certainly on Pradaxa I would. And for that matter,  
16 if you're on warfarin it goes up, too, only if your PT goes  
17 way out. But as I said, the PTT, the aPTT is a good test for  
18 answering the question, is there some Pradaxa effect left in  
19 the body?

20 Q. Doctor, I want to just finish up by talking about what  
21 happened with Mrs. Knight after she was discharged from the  
22 skilled nursing facility in June of 2013.

23 Okay?

24 A. Okay.

25 Q. All right. I'm going to ask you to go to Exhibit 9003B,

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1 and we're going to go to page 277. This is already in  
2 evidence.

3 A. I am there.

4 Q. Okay. Doctor, do you recognize this as a record of a  
5 hospital visit by Mrs. Knight in September of 2013?

6 A. Yes.

7 Q. And this would have been after her bleed had stopped, and  
8 she had been sent back home in June; is that right?

9 A. I think so.

10 Q. Okay. If you look in the section entitled History of  
11 Present Illness, it says chest pain.

12 You see that?

13 A. I do.

14 Q. And it goes on to say: This started just prior to arrival  
15 and is now gone. It is described as dull and aching, and it  
16 is described as located in the right chest area and radiating  
17 to the right upper extremity.

18 Do you see that?

19 A. I do.

20 Q. What's going on there at this point with Mrs. Knight?

21 A. Just another presentation of what would be typical angina  
22 for Mrs. Knight or the absolutely classic findings of coronary  
23 problems.

24 Q. Okay. And if you look a little further down, there is  
25 actually a reference to similar symptoms previously.



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1 Do you see that?

2 A. Yes.

3 Q. And what do --

4 A. And also the nitroglycerin relieving the pain has some  
5 diagnostic significance, makes it much more likely that that  
6 discomfort was from coronary disease.

7 Q. Okay. Do you see the section there where it says similar  
8 symptoms previously?

9 A. I do.

10 Q. And what did they report in terms of whether she had had  
11 similar symptoms to these before?

12 A. There -- there are records throughout the record of  
13 similar symptoms to this.

14 Q. Okay. That's consistent with what you saw in the records;  
15 is that correct?

16 A. That's correct.

17 Q. Okay. As far as you know and based on your review of this  
18 record and others, is what Mrs. Knight is dealing with here,  
19 is that related in any way to Pradaxa or her GI bleed in May  
20 of 2013?

21 A. No --

22 Q. Okay.

23 A. -- it's not.

24 Q. And just to be clear for the record, by this time, Mrs.  
25 Knight was back on Pradaxa; is that right?

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1 A. That's correct.

2 Q. Okay. And do you have any concerns or objections to her  
3 doctors' decisions to put her back on Pradaxa after she had  
4 her bleed?

5 A. You know, some people might be critical of that because --  
6 because of her recent bleed. I'm certainly not. That is  
7 absolutely what I would have recommended for Mrs. Knight.

8 Q. Okay. I'm going to ask you to turn to page 255 in the  
9 same record if you would, please.

10 And if you look up at the top, do you see that this is a  
11 consultation record related to that same hospital admission on  
12 July 12th?

13 A. I do.

14 Q. Okay. And there is a section entitled History of Present  
15 Illness.

16 Do you see that?

17 A. I do.

18 Q. At the top of that section, it says: Ms. Knight is an  
19 84-year-old chronically ill female who has been in and out of  
20 the hospital this year for multiple reasons. She does have a  
21 history of dextrocardia, coronary artery disease and  
22 pacemaker.

23 And then it refers to her GI bleed at the bottom of the  
24 paragraph: She was diagnosed with gastritis and AV  
25 malformations. She went to rehab and was discharged home on

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1 June 8th. She was at home and cared for by her family since  
2 that time.

3 Do you see that?

4 A. I do.

5 Q. Then it goes on and says: She has been weak since all of  
6 her recent admissions. She is just not bouncing back.

7 Do you see that?

8 A. I do.

9 Q. And do you have an understanding of what Mrs. Knight's  
10 doctor was referring to here when he described that she seemed  
11 not to be bouncing back?

12 A. She -- yeah, that described a woman with just lots of  
13 medical problems who is very ill for many reasons.

14 Q. And the specific things that they mention in this record  
15 after that reference to bouncing back is: She's having  
16 exertional shortness of breath. Yesterday she had some mild  
17 right-sided chest pain at rest.

18 Do you see that?

19 A. I do.

20 Q. And would those symptoms be consistent with issues that  
21 Mrs. Knight had been having in terms of her heart disease?

22 A. Correct.

23 Q. And would those symptoms be related in your view at all to  
24 the fact that she had had a GI bleed some month or so prior?

25 A. I don't -- no. I don't think there's a connection at all

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1 there. It's just this is a reflection of -- that her coronary  
2 disease was getting worse and worse and worse.

3 Q. In that same record, I'm going to ask you to turn 178 if  
4 you would, please.

5 Are you there, Doctor?

6 A. I am.

7 Q. Do you see that that page and that record refers to a  
8 hospital stay that started on July 26th and went until August  
9 17th?

10 A. I do.

11 Q. Okay. And if you scroll down in that same record, there  
12 is a section at the top called Admitting Diagnoses.

13 Do you see that?

14 A. I do.

15 Q. What does admitting diagnoses mean?

16 A. The conditions that the patient was admitted into the  
17 hospital in order to treat.

18 Q. It specifically says: General debility stemming from  
19 multiple medical problems including -- do you see that?

20 A. I do.

21 Q. And then there's a list of eight different items, correct?

22 A. That's correct.

23 Q. So, for example, they mention her congestive heart  
24 failure, correct?

25 A. Correct.

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1 Q. They mention her chronic kidney disease, correct?

2 A. Correct.

3 Q. They mention her Type 2 diabetes, correct?

4 A. That's correct.

5 Q. They mention her atrial fibrillation, correct?

6 A. That's correct.

7 Q. Do they mention at all the fact that Mrs. Knight had had a  
8 GI bleed roughly a month and a half prior to this?

9 A. No.

10 Q. Okay. And if you look further down, there is a section  
11 entitled Discharge Diagnoses.

12 Do you see that?

13 A. I do.

14 Q. Does that refer to the doctors documenting this is what we  
15 determined was going on with her while she was in the  
16 hospital?

17 A. That's correct.

18 Q. Okay. And there's a similar type of listing there that  
19 says: General debility stemming from multiple medical  
20 problems, and then there's that same list of eight things,  
21 correct?

22 A. That's correct.

23 Q. And at any point in that listing, do her doctors say we  
24 think something is going on related to a bleed that she had  
25 earlier in the year?

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1 A. They do not.

2 Q. Okay. Just to refresh our recollection, general debility  
3 means what exactly?

4 A. Just doing poorly. Not -- it's a better term for the term  
5 that was used just not bouncing back.

6 Q. Okay. When they describe the reasons for that, what they  
7 describe are some of her heart issues and some of her other  
8 chronic medical conditions?

9 A. I think that's correct.

10 Q. Okay. I'm going to ask you to turn back to 9007B, which  
11 is admitted. We're going to go to page 146, please.

12 A. I'm there.

13 Q. Do you recognize that exhibit -- that record, Doctor?

14 A. I do.

15 Q. Okay. So do you see up at the top that this is a  
16 consultation in connection with an admission by Mrs. Knight to  
17 the hospital on August the 22nd, 2013?

18 A. That's correct.

19 Q. Okay. And if we go down to the section called Reason for  
20 Consultation, we see a reference to elevated troponin.

21 A. That's correct.

22 Q. Do you see that?

23 What does that mean?

24 A. Again, it's the test looking for damage to the heart from  
25 a heart attack.

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1 Q. Okay. And if we go down to the section called History of  
2 Present Illness, it describes Mrs. Knight generally at the top  
3 as a pleasant female with a history of heart disease, atrial  
4 fibrillation, hypertension and dextrocardia.

5 And then in the third paragraph down, it says: The  
6 patient states she had been doing fairly well in her typical  
7 state of health, but she did begin having some episodes of  
8 chest discomfort this week. She describes it as a discomfort  
9 on the right side of her chest, which radiates down her right  
10 arm to the elbow.

11 What's going on there at --

12 A. Again, it's a description of having more symptoms related  
13 to her coronary disease.

14 Q. Okay.

15 A. More of that typical angina that she had.

16 Q. Okay. And just to be complete on this, down at the bottom  
17 of the page, there is a reference to past medical history.

18 Do you see that?

19 A. I do.

20 Q. And the second item that they identify is the fact she had  
21 a gastrointestinal bleed, correct?

22 A. Correct.

23 Q. At any point in this record, do Mrs. Knight's doctors say  
24 we think what is going on with her is related to the fact  
25 she's on Pradaxa or the fact that she had a GI bleed?

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1 A. No, they don't.

2 Q. And in fact, if you turn to page 148 of that same record,  
3 you see there's a section there called Impression.

4 Do you see that?

5 A. I do.

6 Q. And the impression section of a medical record tells us  
7 what exactly?

8 A. What the doctors' diagnoses were that were creating the  
9 symptoms that were treated during that admission.

10 Q. Okay. And in that listing of items there as things that  
11 were possibly contributing to her situation, is there any  
12 reference to Pradaxa or a prior GI bleed?

13 A. No.

14 Q. Okay. And then at the bottom of the page, there is a  
15 section called Plan.

16 Do you see that?

17 A. I do.

18 Q. All right. And at the very bottom of that paragraph, it  
19 says: It should be noted that Dr. Gunnalaugsson did not want  
20 her back on Plavix due to the history of gastrointestinal  
21 bleeding. We will simply keep her on low-dose aspirin along  
22 with the Pradaxa as I do not think that Pradaxa could be held  
23 in the long term given her multiple issues with blood clots.

24 Do you see that?

25 A. I do.



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1 Q. And, again, just based on your clinical experience and  
2 your opportunity to review the medical records, what does this  
3 reflect in terms of what her doctors are doing?

4 A. Just once again in this rock and a hard place business  
5 between stroke risk and clot -- her history of throwing clots  
6 and the coronary disease, they were trying to craft the safest  
7 path for her. In this case, they chose to discontinue the  
8 Plavix, continue the aspirin and continue the Pradaxa.

9 Q. Okay. I'm going to ask you to turn back to 9003 if you  
10 would, please. It's 9003B, and we are going to go to page 62.

11 Are you there, Doctor?

12 A. I am.

13 Q. Okay. And up at the top you can see this is a report from  
14 the emergency room dated September the 1st, 2013.

15 Do you see that?

16 A. I do.

17 Q. And if you look a little further down, there is a section  
18 entitled History of Present Illness.

19 Do you see that?

20 A. I do.

21 Q. And the first line says: Chest pain, dyspnea. This  
22 started today and is still present. It has been constant.

23 What is going on there, Doctor?

24 A. Again, more of the classic coronary artery disease  
25 symptoms, the shortness of breath and the chest discomfort

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1 that she complained of all through this period.

2 Q. Okay. Now one of the things I wanted to ask you about is  
3 there's a reference in the next paragraph to her home health  
4 support team saying that the patient had red-tinged urine the  
5 day before.

6 Do you see that?

7 A. I do.

8 Q. And is it your understanding that there was actually a  
9 urinalysis done to assess whether they could detect the  
10 presence of blood in Mrs. Knight's --

11 A. Yeah, I think the urinalysis -- I'm sorry. I didn't mean  
12 to interrupt you.

13 Q. That's okay.

14 A. I think the urinalysis was done the next day.

15 Q. Okay. Let's actually look at that document, which is on  
16 page 95. This is just a set of the records related to some of  
17 the labs that were done. I'm going to ask you to direct your  
18 attention to page 97 if you would, please.

19 And just to situate ourselves, you see at the top of the  
20 page there's a reference to her name, Mrs. Knight. And you  
21 see there's a reference to date and time ordered.

22 Do you see that?

23 A. I do.

24 Q. And it says on September the 1st, 2013, sometime in the  
25 afternoon --

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1 A. Yes.

2 Q. -- correct?

3 And then if we scroll down, there is a listing of tests  
4 that were done on Mrs. Knight's urine sample.

5 You see that?

6 A. Yes.

7 Q. And this was done in conjunction with the report by her  
8 home health workers that they thought they saw blood in her  
9 urine; is that right?

10 A. That's correct.

11 Q. Okay. And if you look at the line that reads UA blood,  
12 what does it -- what does it report there in terms of whether  
13 that was positive or negative for blood in her urine?

14 A. It reports that there was no blood detected in her urine.

15 Q. Okay. If you wanted to know whether someone had blood in  
16 his or her urine, is the way you would figure it out to  
17 actually do a urinalysis?

18 A. Correct.

19 Q. Doctor, just to finish up our discussion, I'm going to ask  
20 you to turn back to 9003B, please.

21 A. Okay.

22 Q. And we're going to go to page 72, if you would.

23 A. I'm there.

24 Q. And, again, do you see this is a record relating to  
25 Mrs. Knight's hospitalization in September of 2013?

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1 A. I do.

2 Q. And what they list in the assessment section is -- what is  
3 that intended to capture in terms of what the doctors were  
4 doing and thinking at the time?

5 A. It shows that they -- that she was in acute respiratory  
6 failure, and the doctors thought that what happened to her was  
7 a cardiac arrest at home or a heart rhythm problem. And --  
8 and they had a long discussion with the family about whether  
9 to proceed with aggressive therapy. And after much  
10 discussion, it was decided not to do that.

11 Q. Okay. And the second item listed there is new myocardial  
12 infarction by enzyme criteria.

13 Do you see that?

14 A. I do. That --

15 Q. And did -- go ahead.

16 A. That means the troponin was elevated.

17 Q. Okay. At the end of that No. 2 items, it says: I will  
18 continue her on her Pradaxa and aspirin.

19 Do you see that?

20 A. I do.

21 Q. So they kept her on her Pradaxa during that  
22 hospitalization?

23 A. Correct.

24 Q. Okay. Is there any mention in this record to doctors  
25 believing that what had happened with Mrs. Knight at the

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1 beginning of September had something to do with her having a  
2 GI bleed or her Pradaxa treatment?

3 A. No, there is not.

4 Q. Dr. Crossley, do you have an understanding that Mrs.  
5 Knight passed away on September the 2nd, 2013?

6 A. I do.

7 Q. Okay. And I'm going to ask you to turn to 9006A in your  
8 binder. We're going to go to page 20.

9 A. I'm there.

10 Q. Do you recognize that record, Dr. Crossley?

11 A. Yes.

12 Q. Okay.

13 MS. JONES: Your Honor, we would move for the  
14 admission of 9006A.

15 THE COURT: Any objection?

16 MR. CHILDERS: No, sir.

17 THE COURT: It's admitted.

18 (DEFENDANT'S EXHIBIT 9006A ADMITTED INTO EVIDENCE.)

19 MS. JONES: Okay. We're at 20.

20 Q. Dr. Crossley, do you see at the top of the page this is a  
21 death summary prepared by Mrs. Knight's doctors that's dated  
22 September the 2nd, 2013?

23 A. Yes.

24 Q. And there is a reference there to diagnosis at time of  
25 death. Do you see that?

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1 A. I do.

2 Q. And they refer to two things, acute respiratory failure  
3 and out-of-hospital cardiac arrest; is that right?

4 A. Correct.

5 Q. And does that just mean that Mrs. Knight's heart and her  
6 lungs stopped working?

7 A. Yes.

8 Q. Okay. In the discussion section, it says: This was an  
9 84-year-old debilitated white female with a long list of  
10 medical problems, and then it goes on to list some of those  
11 issues. And then later in that record, it says it is likely  
12 that she had an out-of-hospital cardiac arrest a little  
13 further down.

14 Is that consistent with your understanding of what had  
15 happened with Mrs. Knight?

16 A. It is.

17 Q. Okay. And at any point in this record, is there any  
18 discussion of her doctors believing that her passing had  
19 somehow been caused by her use of Pradaxa or the fact that she  
20 had a GI bleed on Pradaxa?

21 A. No, there is no reference to that.

22 Q. Doctor, the last exhibit I want to look at with you is  
23 Exhibit 9001, which is already in evidence.

24 Is this a document that you reviewed as part of your  
25 evaluation of the medical records in this case?

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1 A. It is.

2 Q. Do you recognize it as the death certificate or  
3 certificate of death for Mrs. Knight dated September 2nd,  
4 2013?

5 A. I do.

6 Q. Okay. As part of your clinical practice, have you had to  
7 complete death certificates for your patients?

8 A. I have.

9 Q. And is that a task that you take seriously?

10 A. Definitely.

11 Q. Is it something that you try your best to be as accurate  
12 as you can when you are doing it?

13 A. Correct.

14 Q. Okay. And do you have an understanding that this was a  
15 death certificate that was completed by Dr. Abdelgaber, Mrs.  
16 Knight's primary care doctor, in September of 2013?

17 A. I do.

18 MS. JONES: If we look down at the bottom of the page,  
19 there is actually a signature from Dr. Abdelgaber.

20 Thank you, Mr. Reynolds.

21 Q. Dr. Crossley, there's a question in this certificate that  
22 refers to the immediate cause of Mrs. Knight's death.

23 Do you see that?

24 A. I do.

25 Q. It says cardiopulmonary arrest. What does that mean?

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1 A. That means that she had a disastrous heart rhythm problem,  
2 and her heart effectively quit pumping.

3 Q. Okay. Then it goes on to say -- it refers to acute  
4 myocardial infarction, and then it lists atherosclerotic  
5 coronary artery disease and hyperlipidemia.

6 Do you see that?

7 A. I do.

8 Q. Based on your review of the medical records, what is your  
9 understanding of what that reflects in terms of what caused  
10 Mrs. Knight's passing?

11 A. I think it reflects what we've been talking about all  
12 morning, which is that she had progressive coronary disease  
13 that was caused by multiple risk factors. Hyperlipidemia was  
14 one of those. That created the blockage in her arteries, the  
15 atherosclerotic coronary artery disease. That set her up for  
16 the acute myocardial infarction. And then acute myocardial  
17 infarction caused the cardiac arrest.

18 Q. Okay. And then there is another section immediately below  
19 that section that says: Other significant conditions  
20 contributing to death, but not resulting in the underlying  
21 cause.

22 Do you see that?

23 A. I do.

24 Q. Based on your experience, is that an opportunity for  
25 doctors to identify other things that they thought might have



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1 somehow contributed to the death, but not an immediate cause  
2 of the death?

3 A. Correct.

4 Q. Okay. And what is listed there in that section?

5 A. CHF is heart failure. HTN is hypertension. CKD is  
6 chronic kidney disease. And dementia is listed there as well.

7 Q. Okay. And are the conditions that are listed there  
8 conditions -- conditions that are consistent with what you saw  
9 in Mrs. Knight's medical records as things that she had going  
10 on for a while?

11 A. That's correct.

12 Q. Okay. Do you have a view to a reasonable degree of  
13 medical certainty whether, based on your review of the  
14 records, this death certificate accurately reflects what was  
15 the cause of Mrs. Knight's passing?

16 A. It certainly accurately reflects what I saw in the record.

17 Q. Okay. At any point in this certificate of death, did Dr.  
18 Abdelgaber ever report that he believed that Pradaxa or Mrs.  
19 Knight having a gastrointestinal bleed somehow contributed to  
20 her passing?

21 A. No, he does not.

22 Q. Okay. Dr. Crossley, I thank you for your time.

23 I want to ask you one last question, which is, are all of  
24 the opinions that you have offered today offered to a  
25 reasonable degree of medical certainty?

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1 A. They are.

2 MS. JONES: Thank you.

3 THE COURT: All right. Does that conclude your  
4 examination?

5 MS. JONES: It does, Your Honor.

6 THE COURT: All right. Ladies and Gentlemen, we'll  
7 take a lunch break now before we start cross-examination.

8 Let's be back at 1:15. Remember my instructions  
9 before. Don't discuss the case or allow anyone to discuss it  
10 with you. Don't start deliberating or try to ponder a  
11 verdict. Make sure that, as you return to the courthouse, you  
12 come back to the jury room. You can stay there as long on  
13 this break as you like. I will see you back here at 1:15.

14 Doctor, you can step down. Don't discuss your  
15 testimony with anyone.

16 I'd like to have a side bar with counsel off the  
17 record for just a moment.

18 (Side bar conference, not reported.)

19 (Lunch recess taken at 12:07 p.m.)

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1 THE COURT: All right. Are we ready to resume the  
2 cross-examination?

3 MR. CHILDERS: Yes, Your Honor.

4 THE COURT: Doctor, if you'll resume the stand.

5 **GEORGE CROSSLEY, DEFENDANT'S WITNESS, RESUMED THE**  
6 **WITNESS STAND**

7 THE COURT: All right. Let's bring the jury out.

8 (Jury returned into the courtroom at 1:19 p.m.)

9 THE COURT: All right, you may be seated.  
10 Cross-examination?

11 MR. CHILDERS: Yes, Your Honor. My papers got a  
12 little mixed up here.

13 THE COURT: That's all right. Take your time.

14 MR. CHILDERS: Thank you, Your Honor.

15 CROSS EXAMINATION

16 BY MR. CHILDERS:

17 Q. Good afternoon, Dr. Crossley.

18 A. Hello.

19 Q. We met before; right?

20 A. Correct.

21 Q. And that was in Nashville?

22 A. Correct.

23 Q. Okay. I want to ask you some follow-up questions to  
24 the testimony you gave earlier today. Okay?

25 A. Okay.

1 Q. The jury heard yesterday from Dr. Shami. Do you know  
2 Dr. Shami?

3 A. I met her briefly yesterday. I never had a --

4 Q. Were you here --

5 A. -- conversation with her other than to say "hi" and  
6 share pleasantries about the University of Virginia.

7 Q. Were you here when she testified?

8 A. Yes.

9 Q. Okay. So then I take it you don't know that yesterday  
10 she testified that warfarin just did not work for Betty  
11 Knight. Did you know that?

12 A. I didn't know that.

13 Q. You don't agree with that, do you?

14 A. As I said earlier, I don't think warfarin would be  
15 outside the standard of care. I do think that there's lots  
16 of reasons to think that one of the NOACs would be far  
17 superior for stroke prevention.

18 Q. You agree with me that it would have been appropriate  
19 for Betty Knight to stay on warfarin when she was switched;  
20 right?

21 A. Within the standard of care.

22 Q. You agree with me it would have been an appropriate  
23 choice; correct?

24 A. I, I can't clarify it more than what I've said, that I  
25 think it's within the standard of care and I do think the

1 NOACs would have been a better -- were a better choice  
2 because of superior stroke prevention. I think she -- that  
3 is something that we always push to get on a NOAC when we  
4 can. But if we can't, we settle for warfarin.

5 Q. Doctor, you recall in your deposition I asked you that  
6 same question?

7 A. Uh-huh.

8 Q. And you gave me a different answer?

9 A. I gave you the same substance.

10 Q. Let me hand you your deposition.

11 MR. CHILDERS: May I approach, Your Honor?

12 THE COURT: You may.

13 BY MR. CHILDERS:

14 Q. Okay. If you would turn with me to Page 192 and line  
15 12.

16 A. Yes, sir.

17 Q. Do you see that I asked you, "You don't disagree that  
18 it would have been appropriate for Ms. Knight to stay on  
19 warfarin, do you?"

20 And you answered, "I think either would have been  
21 okay."

22 A. That is -- I think that's compatible with what I just  
23 said, that, that it's within the standard of care to use it.  
24 I would have rather had the NOAC.

25 Q. That's not what you said in your deposition, though;

1 correct?

2 A. That, that -- the meaning of the two is the same to me,  
3 sir.

4 Q. Okay. Well, let's look then also on Page 216 when I  
5 asked you that question in a different way, line 3.

6 Do you see I asked you, "She was an appropriate  
7 candidate for warfarin; correct?"

8 And your answer was, "It would be appropriate for her  
9 to stay on warfarin."

10 Right? Isn't that right?

11 A. That is correct. And I think appropriate means it's  
12 within -- to me means it's within the standard of care and  
13 that's what I just said. It's certainly within the standard  
14 of care, but I would certainly have a preference for the  
15 NOAC.

16 Q. And you wouldn't agree that warfarin just did not work  
17 for Ms. Knight; correct?

18 A. No.

19 Q. Okay. I think you testified earlier that -- I'm sorry.  
20 Let me take a step back. You just said you would have  
21 preferred Pradaxa; is that right?

22 A. Yes.

23 Q. And specifically for Ms. Knight if she had been your  
24 patient?

25 A. Correct. And the reason is what I stated before is her

1 CHADS-VASc score that defines the upper limits of the scale.

2 Q. You know Ms. Knight, Betty, had reflux; right?

3 A. Yes.

4 Q. Or we call it GERD sometimes?

5 A. Uh-huh.

6 Q. You avoid Pradaxa in your own patients who have GERD,  
7 don't you?

8 A. If we can, but not in somebody who has a CHADS-VASc  
9 score of 9.

10 Q. So if you would -- do you recall I asked you that same  
11 question at your deposition; right?

12 A. I -- I'm sure you're going to show me that.

13 Q. Yes, sir. If you'd turn to Page 195, we were talking  
14 about if you had preferences for one drug over the other for  
15 anticoagulation. Do you recall that discussion?

16 A. Yeah. I think that's perfectly compatible with what I  
17 just said.

18 Q. Okay. And you said -- when I asked you if you had any  
19 preference, you said the only preference -- at line 8  
20 through 11. You said, "The only preference I would say is  
21 that patients who have nausea or GERD on Pradaxa is a bit  
22 higher than the other drugs. So if you have that, I would  
23 go to another drug."

24 Right?

25 MS. JONES: Excuse me, Mr. Childers. I'm going to

1 object, Your Honor. I don't think this is proper  
2 impeachment. It's not inconsistent with what he said.

3 THE COURT: First, I could barely hear you. I  
4 don't know if that microphone is on.

5 MS. JONES: I apologize.

6 THE COURT: State your objection again.

7 MS. JONES: My objection, Your Honor, is that this  
8 is improper impeachment. This is not inconsistent with what  
9 he just said.

10 MR. CHILDERS: I disagree, Your Honor. I think it  
11 is --

12 THE COURT: Well, it's cross-examination. I'll  
13 allow it.

14 MR. CHILDERS: Okay.

15 BY MR. CHILDERS:

16 Q. So when I asked you that question about your preference  
17 at your deposition, you said a patient with GERD, you'd go  
18 with a different anticoagulant; right?

19 A. This, this was asking me among the NOACs --

20 Q. Okay.

21 A. -- what's my preference. And it is certainly true that  
22 Pradaxa does have a certain instance of GERD and it can  
23 aggravate the GERD and I might pick another NOAC rather than  
24 Pradaxa. But that's not a medically significant thing.  
25 That just has to do with whether it's aggravating GERD or



1 not.

2 Q. Well, for your own patient that's the choice you would  
3 make; correct?

4 A. In the framework of what I just said, Mr. Childers.

5 Q. Understood. I want to ask you about -- actually, let  
6 me just put something here. If I could to start --

7 MS. JONES: Your Honor, is it okay if I just  
8 re-adjust so I can see the board?

9 THE COURT: Yes, it is.

10 MR. CHILDERS: I'm sorry. This is your chart.  
11 I'll switch out so I don't write on yours.

12 MS. JONES: Okay. That would be great also.

13 MR. CHILDERS: I'm sorry, Your Honor. This is  
14 theirs, not mine.

15 THE COURT: Well, all she wanted to do was  
16 relocate over there.

17 MS. JONES: I don't mind sharing a blank piece of  
18 paper certainly. I just wanted to be able to see what was  
19 being written. You're welcome to it.

20 MR. CHILDERS: I didn't say she was complaining  
21 about that. I just realized I was writing on her board.

22 THE COURT: Fair enough.

23 BY MR. CHILDERS:

24 Q. Okay. Is that accurate, that you would avoid Pradaxa  
25 in a patient with GERD if possible?

1 A. Often I do, yeah. The -- I mean, very frequently our  
2 choice of NOACs is not ours, but it's that of the insurance  
3 company. And in a patient with GERD if that were -- if  
4 Pradaxa were the preferred one, I would try it and see if it  
5 worsens GERD.

6 It's not a medically important thing for the patient.  
7 It's simply a symptom thing. And if you, and if you give it  
8 to a patient who has GERD and the GERD worsens, then I would  
9 switch to another one.

10 Q. Understood. And that's why in your practice you try to  
11 avoid Pradaxa in your GERD patients; right?

12 A. On that very little limited issue, yes.

13 Q. Okay. You've had -- frequently have had patients come  
14 to you and ask for a specific one of the NOAC drugs,  
15 Xarelto, Pradaxa or Eliquis, to be given to them as a switch  
16 from warfarin; correct?

17 A. Correct.

18 Q. And the reason you believe they've done that is because  
19 they've seen a television ad; right?

20 A. Correct. Sometimes they ask for a specific one.  
21 Sometimes they just ask for one of the new drugs. Often the  
22 latter is prompted by their primary care physician. The  
23 former is prompted by an ad on television.

24 Q. So when you have a patient that comes and says, "I want  
25 to be on Pradaxa," it's your assumption they saw a

1 television ad; right?

2 A. Usually.

3 Q. Okay. You read the depositions of Rick Knight and  
4 Claudia Stevens; right?

5 A. I did.

6 Q. And you saw -- you recall from those depositions that  
7 Claudia testified that she saw a Pradaxa ad and that she  
8 called or told Rick about it. And then he called Dr.  
9 MacFarland's office to talk about switching Betty Knight  
10 from warfarin; correct?

11 A. That, that's my memory.

12 Q. And you saw records that reflected that; correct?

13 A. That's my memory.

14 Q. And, in particular, you saw that they went into the, to  
15 Dr. MacFarland's office and specifically asked for Pradaxa;  
16 right?

17 A. I, I wouldn't argue with that. I think that is what  
18 happened.

19 Q. Okay. And consistent with your experience, that would  
20 indicate to you if that was your patient they probably saw a  
21 television ad that brought them in; right?

22 A. That's a humorous guess. It's certainly not based on  
23 any data.

24 Q. That's based on your experience; correct?

25 A. That's my guess when that happens, yes. That's what

1 I'm saying.

2 Q. You didn't see any medical record in any of these  
3 documents you reviewed that suggested one of Betty's doctors  
4 actually suggested or initiated her switching from warfarin  
5 to Pradaxa, did you?

6 A. Sure. Dr. MacFarland's -- Dr. MacFarland's note said  
7 she switched it for good reason. That, that -- I think  
8 you're trivializing her medical concerns to say that it was  
9 all based on some ad on television.

10 Q. Before that day -- you're talking about the day they  
11 came in and actually got Pradaxa.

12 A. Right.

13 Q. Before that day, you never saw any record that said  
14 Betty Knight --

15 A. Nothing --

16 Q. -- should switch right?

17 A. Yes. Excuse me for interrupting. No, nothing before  
18 that.

19 Q. Okay. I thought on direct testimony you said that all  
20 of the NOACs did better than warfarin in the clinical  
21 trials. Is that what you testified?

22 A. Yes.

23 Q. Okay. And you said that Pradaxa -- I think you said it  
24 was studied in what you called a gargantuan trial?

25 A. 18,000 patients.

1 Q. And that trial, I think you testified that the strategy  
2 they used there was, "We're not going to monitor the  
3 patient's blood for dosing. We're going to compare no  
4 monitoring to monitored warfarin." Right?

5 A. That's correct.

6 Q. And in that test -- and in that clinical trial -- we're  
7 talking about the RE-LY trial; right?

8 A. That's correct.

9 Q. In that RE-LY trial they never tested the 75-milligram  
10 dose compared to warfarin; correct?

11 A. That is correct.

12 Q. They didn't test the 75-milligram dose against warfarin  
13 to see if it was better at stroke prevention; right?

14 A. The 75-milligram dose came from the FDA discussion at  
15 the end of the trial.

16 Q. Understood. I'm asking you about the clinical trial  
17 itself.

18 A. Correct. There was no 75-milligram dose available at  
19 that time.

20 Q. Not in any one of those 18,000 patients in that  
21 gargantuan trial was the 75-milligram dose tested?

22 A. That's correct.

23 Q. And the 75-milligram dose was not tested in any one of  
24 those 18,000 patients to see if the bleed risk was better on  
25 that dose compared to warfarin; correct?

1 A. That's correct. It was a pharmacokinetics analysis  
2 that led to that. So the, the FDA scientists looked at the  
3 sub-analysis, the pharmacokinetics, and said, "We have this  
4 high risk population," and expanded the indication to that  
5 at the 75-milligram dose.

6 Q. No, I understand. My question, though, related to this  
7 gargantuan trial that you described. Nobody in that trial  
8 took a 75-milligram dose; right?

9 A. Correct.

10 Q. Okay. And when you say the NOACs did better than  
11 warfarin in the clinical trials, what you're talking about  
12 is the doses that were actually tested in the clinical  
13 trials; right?

14 A. That's correct.

15 Q. Okay. Would you agree with me that we don't have any  
16 actual clinical data to show the 75-milligram dose is better  
17 than warfarin for AFib patients?

18 A. We don't have any randomized control data. The data we  
19 have is the pharmacokinetics data to say that those patients  
20 with renal failure are expected to have a same -- a similar  
21 blood level to the patients that were in the RE-LY study.  
22 And that's why the FDA did what they did.

23 Q. And that's not what we would call an outcome study;  
24 correct?

25 A. Correct.

1 Q. An outcome study would be: Let's see what happens,  
2 actually happens to the patients when we give them the drug.  
3 Do we have less strokes? Do we have less bleeds? Right?  
4 That's an outcome study; correct?

5 A. That's correct.

6 Q. And we don't have any of that kind of data for the  
7 75-milligram dose; right?

8 A. We have, we have real-world data from large studies  
9 that show outcomes after the 75-milligram dose was relieved.  
10 We do not have any randomized control outcome data.

11 Q. And in those real-world studies you agree with me that  
12 they say quite a number of the people that are on the  
13 75-milligram dose, we couldn't even confirm that they had  
14 severe renal impairment.

15 A. They did say that.

16 Q. So what they believed was there were people who didn't  
17 have severe renal impairment who were taking the  
18 75-milligram dose.

19 A. That was a concern raised about those real-world  
20 studies.

21 Q. And that's why you really can't use that kind of a  
22 study to get outcome data; correct?

23 A. That -- those -- I wouldn't say you can't use  
24 real-world studies. They don't have the same level of  
25 evidence as a randomized control study.

1 Q. It's not like one of those gargantuan trials that they  
2 tested it.

3 A. It was certainly gargantuan. There's a lot of patients  
4 in that. But it's not like a randomized control trial. Our  
5 highest level of evidence when we, when we generate, when we  
6 generate the, our recommendations like from the American  
7 College of Cardiology, our highest level of evidence is a  
8 randomized control trial. Our next level of evidence down  
9 is these large real-world trials.

10 Q. Not one of those patients in those large real-world  
11 trials even knew they were in a trial, did they?

12 A. Correct.

13 Q. So the next thing I'm going to write is there's no  
14 clinical evidence that 75-milligram dose is better than  
15 warfarin. That's correct, isn't it?

16 A. No. I don't agree with that. There is evidence that  
17 it, that it -- there is evidence that the FDA used to  
18 approve that that says that, that it's equivalent based on  
19 the pharmacokinetics analysis.

20 Q. Do you see the word "clinical" here?

21 A. I see the word "clinical." I know what clinical means,  
22 sir.

23 Q. All right. And you --

24 A. You're interrupting me.

25 Q. I thought you were finished.



1 A. I was not.

2 Q. Go ahead.

3 A. So in the -- you're trying to mischaracterize what I'm  
4 saying here and generate text up there for the jury. And I  
5 wouldn't buy at all that there's no clinical evidence that  
6 the 75-milligram dose is, is equivalent to the 150-milligram  
7 in patients that have normal renal function.

8 That data is what our scientists at the Food and Drug  
9 Administration analyzed and created the 75-milligram dose  
10 rather than approving the 110-milligram dose.

11 Q. And that's why I wrote "clinical," sir. They didn't  
12 actually test the dose in patients; correct?

13 A. It's not a randomized controlled study. That's what I  
14 would agree to. Clinical means it has to do with the care  
15 of patients.

16 Q. Okay. And which study are you talking about where they  
17 actually compared the 75-milligram dose of warfarin to --  
18 I'm sorry -- of Pradaxa to warfarin?

19 A. I just said what you said, that there's no randomized  
20 controlled study. That doesn't mean there's no clinical  
21 evidence. Clinical means having to do with the care of  
22 patients. Clinical isn't defined as a randomized controlled  
23 trial. You're misdefining the word.

24 Q. Okay. No controlled trial evidence. How about that?

25 A. I'll agree to that.

1 Q. Great. I want to talk to you about how Pradaxa is  
2 dosed in patients in the United States. Okay?

3 If I understood your testimony correctly when we met  
4 last, you believe that Pradaxa dosing should be based on  
5 age, renal function, and something you referred to as  
6 fragility. Is that right?

7 A. Frailty.

8 Q. Maybe the court reporter got it wrong. Frailty?

9 A. Correct.

10 Q. Okay. Those are the three things you think Pradaxa  
11 should be dosed on?

12 A. Yeah. And age and renal function are tightly linked.

13 Q. Okay. Do you have -- you looked at a Pradaxa label  
14 earlier; right?

15 A. I did.

16 Q. I can't recall specifically what number that was. Can  
17 I look in your book there and -- actually, I have one of  
18 those books here. Pull out that Pradaxa label if you would  
19 for us.

20 A. The label from January of 2012 is on 5884.

21 Q. Great. Thank you for that. Tell us, if you would,  
22 where that label says you should consider age when you're  
23 deciding the dose of Pradaxa you should give to a patient.

24 A. I honestly don't know.

25 Q. Take your time.

1 A. So I think where age comes into this is under eight  
2 five under "Geriatric Use."

3 Q. Okay.

4 A. It says, "Of the total number of patients in the RE-LY  
5 study, 82 percent were 65 and over while 40 percent were 75  
6 and over. The risk of bleeding increases with age but the  
7 risk profile is favorable in all groups."

8 Q. Okay.

9 A. So I think that's where it brings up the point that age  
10 may increase the bleeding risk.

11 Q. Where does that section tell us that the dose should be  
12 adjusted based on a patient's age?

13 A. I think it's implied from that, but I don't think that  
14 is specifically stated in the package insert.

15 Q. Why don't we look, then, on the section that's actually  
16 called "Dosing Adjustments" if we could. It's Section 2.2.

17 Can you blow that up for us, Gina?

18 A. I do see that.

19 Q. That's where you would expect to find information about  
20 how you dose a medication; right?

21 A. Well, as I said, -- as I said in my deposition and I  
22 said this morning, and I said in response to your question,  
23 age and renal function are tightly linked there. There is a  
24 normal decline in renal function with age. And that's  
25 really where that whole thing comes into play.

1 Q. I understand.

2 A. As your creatinine clearance falls, you should, you  
3 should adjust the dose. So as I, as I -- as you and I  
4 argued considerably in my deposition, I think all of this  
5 adjustment really hinges on renal, on renal function.

6 Q. Well, I want to break that down a bit because you said  
7 at your deposition very clearly there were three things that  
8 you considered in dosing your patients; right?

9 A. Correct.

10 Q. And one of them was age. One of them was renal  
11 function. And one of them is frailty. Right?

12 A. Right.

13 Q. So with age, would you agree with me that in the  
14 Pradaxa label it doesn't tell you to consider age when you  
15 are choosing a dose?

16 A. That's correct.

17 Q. Okay. It does say renal function; right?

18 A. Yes.

19 Q. Okay. Tell us in the label where it tells you that you  
20 should consider frailty.

21 A. I don't think it tells you that in the, in the, in the  
22 package insert. That's just part of being a doctor. When  
23 you're giving medicine that has potential bleeding or other  
24 side effects, you've got to take into account the patient's  
25 frailty.

1 And frailty means how sick you are, how generally ill  
2 you are. That's what frailty means. It has a very thick  
3 definition. There's a whole body of science in gerontology  
4 to look at frailty and come up with indices and things to  
5 measure it. Most of us take a  
6 you-recognize-it-when-you-see-it kind of approach to  
7 frailty.

8 Q. You're not a gerontol -- I'm not sure how you pronounce  
9 it.

10 A. Gerontologist. I'm definitely not a gerontologist and  
11 I'm not about to get up here and talk about those frailty  
12 indices. I take an approach of recognizing it when you see  
13 it.

14 Q. Okay. And then when you recognize that, what does the  
15 label tell you about how to adjust the dose?

16 A. The label doesn't say that. That's what I said.  
17 That's part of being a good doctor.

18 Q. Okay. And, so, when you see it, then, how do you  
19 decide to change the dose for a Pradaxa patient?

20 A. If they're frail, you're tempted to lower the dose.

21 Q. Okay. So that would be what we call off label; right?

22 A. That -- not necessarily -- well, it is off label if  
23 you're, if you're doing it without a decrease in renal  
24 function, yes.

25 Q. So what that means is we've heard over and over again

1 from the defendant this is the label that the FDA approved;  
2 right?

3 A. Correct.

4 Q. And what you're telling us is you don't even go by that  
5 when you're dosing some of your patients; correct?

6 A. No, I'm not -- I'm, I'm telling you that that's a guide  
7 and that's just part of, one of the tools that you use in  
8 practicing medicine.

9 You know, if medicine were as simple as we only had to  
10 look at the label to know what to do, we wouldn't need  
11 doctors. We'd just need computers. And what I'm telling  
12 you is there are multiple factors you look at in prescribing  
13 any therapy for a patient that involves risk. And most of  
14 my therapies do involve risk.

15 Q. And there are multiple medications you can give a  
16 patient for anticoagulation; correct?

17 A. There are three NOACs and warfarin.

18 Q. And Pradaxa is the only one that predominantly gets  
19 cleared through the patient's kidneys; right?

20 A. It's the most cleared through the kidneys, yes.

21 Q. Okay. And so with a kidney impaired patient, you've  
22 got to be very careful with Pradaxa; correct?

23 A. You've got to be careful and you've got to dose it.  
24 And that's, that's why her doctors chose the 75-milligram  
25 dose.

1 Q. And there are some patients that Pradaxa is just not  
2 the right medication for; correct?

3 A. Sure.

4 Q. Okay. I think -- and I'm sorry if I wrote this down  
5 wrong. I was trying to take notes while you talked. Did  
6 you testify on direct that we don't have a way to measure  
7 Pradaxa blood levels?

8 A. No. I testified that we do have a way to measure  
9 Pradaxa blood levels, but it's very time consuming and we  
10 think it's very expensive.

11 And what I told you is that at Vanderbilt, same thing I  
12 told you in my deposition, that at Vanderbilt we do not have  
13 a way to do it because our lab tests go through a process  
14 where a committee looks at them. Anything that gets sent  
15 out has to be approved by a committee for its utility so  
16 that we're not wasting a lot of money doing things that  
17 there's not science behind.

18 Q. You --

19 A. So at Vanderbilt if I ordered one, I would have to go  
20 through an appeals process with a committee to get it sent  
21 out.

22 Q. Or you could send it over to LabCorp or Quest; right?

23 A. No. To send it out, I would have to go through that  
24 appeals process.

25 Q. Understood.

1 A. I mean, if I wanted to pay for it myself and write a  
2 check for it, I could. I could send it to LabCorp or Quest  
3 and pay for it myself.

4 Q. So the reason that you don't measure Pradaxa levels is  
5 partly based on the fact that Vanderbilt won't let you do  
6 that. Is that accurate?

7 A. The reason I don't measure Pradaxa levels is I haven't  
8 seen any science that tells me I should measure Pradaxa  
9 levels.

10 Q. Has Boehringer ever told you how to measure Pradaxa  
11 levels?

12 A. No.

13 Q. You, you believe they know how to do it; right?

14 A. Sure. They did in the clinical trial.

15 Q. Okay. Have you ever seen the European Pradaxa label?

16 A. I don't practice in Europe.

17 Q. That's not my question. Have you ever seen --

18 A. Only as part of preparation for this trial. I think  
19 you showed it to me.

20 Q. Okay. So you have seen it?

21 A. Yeah. I think you showed it to me the day of my  
22 deposition.

23 Q. I was the first person to show it to you?

24 A. As far as I know, you were.

25 Q. And that was after you'd been hired by Boehringer to be



1 an expert in the case; right?

2 A. That's correct.

3 Q. And I think you told the jury earlier you've been  
4 working on this case a long, long time; right?

5 A. I have.

6 Q. And it took until the time of your deposition for you  
7 to even know what Boehringer told doctors in other countries  
8 about how and when to measure blood levels; right?

9 A. I -- about how and when to measure blood levels? I, I  
10 think that -- I -- well, my memory of the label may be off  
11 but I don't -- I think that the label recommends alternative  
12 clotting test, not blood levels.

13 Q. Well, let's take a look at it.

14 A. Okay. Since I don't practice in Europe, I don't -- I  
15 certainly don't have the European label memorized.

16 Q. And I don't expect you to. My question just dealt with  
17 whether or not you've seen it and whether or not you know  
18 what it says. Sorry.

19 MR. CHILDERS: May I approach, Your Honor?

20 THE COURT: You may.

21 BY MR. CHILDERS:

22 Q. This is Exhibit Number 80 which is already in evidence.  
23 Do you recognize that's the European label that I first  
24 showed you at your deposition?

25 A. Correct.

1 Q. And if you would look with me on Page 6, do you see  
2 there's a -- there are two charts and there's a couple  
3 paragraphs in between them.

4 A. Correct.

5 Q. Do you see it says that the presence of lesions,  
6 conditions, procedures and/or pharmacological treatment --  
7 and it's got some treatments listed --

8 A. I'm not, I'm not following you. Hang on just a minute.

9 Q. If you want to look on the screen, that may help you  
10 orient yourself.

11 A. Okay.

12 Q. Then it says the presence of lesions, conditions,  
13 procedures and/or pharmacological treatment such as NSAIDs,  
14 anti-platelets, SSRIs and SNRIs which significantly increase  
15 the risk of major bleeding requires a careful benefit-risk  
16 assessment. Pradaxa should only be given if the benefit  
17 outweighs the bleeding risks. Correct?

18 A. Yes.

19 Q. And you agree with that; right?

20 A. Certainly.

21 Q. You know those sentences are not in the U.S. label;  
22 correct?

23 A. I, I assume they're not. I don't remember them.

24 Q. Okay. And then when we look on the next paragraph, it  
25 says Pradaxa does not in general require routine

1 anticoagulant monitoring. Do you see that?

2 A. Yes.

3 Q. And that actually is in the U.S. label; correct?

4 A. Correct.

5 Q. And then it goes on to say, "However, the measurement  
6 of dabigatran related anticoagulation may be helpful to  
7 avoid excessive high exposure to dabigatran in the presence  
8 of additional risk factors."

9 Do you see that?

10 A. I do.

11 Q. You agree with me that sentence is not in the U.S.  
12 Pradaxa label; right?

13 A. That's correct.

14 Q. It's never been in the U.S. Pradaxa label; right?

15 A. That's correct.

16 Q. Okay. And then when you look just below that paragraph  
17 there's actually a Table II that tells us coagulation test  
18 thresholds, meaning the readings at trough that may be  
19 associated with an increased risk of bleeding; right?

20 A. Correct.

21 Q. And it's got three tests listed there that you can use.  
22 And then it says the INR should not be used; right?

23 A. That's correct.

24 Q. Okay.

25 A. But these -- none of these -- you said before measured

1 dabigatran levels. None of these are saying measure

2 dabigatran levels. That's what I was trying to say.

3 Q. Understood. These are coagulation test thresholds;  
4 correct?

5 A. Correct.

6 Q. Which tells you how well or how effective the  
7 dabigatran is in the patient; right?

8 A. It tells you a little bit about it. None of these  
9 tests are good tests for measuring the effect. And that's  
10 what I said in my testimony.

11 Even the compilation of the group of folks that got  
12 together for the two think-tank meetings to, to think about  
13 ways to manage these drugs agreed that we don't have the  
14 right test to do this with.

15 These tests are relevant. And, as I said, like the  
16 aPTT is a good -- what the literature would say is it's a  
17 good test for saying: Is there some dabigatran around?  
18 It's not a great test to say dabigatran is at the  
19 therapeutic level.

20 Q. The DTT test, that's the diluted thrombin time; right?

21 A. Yes.

22 Q. You understand that is a very good test that, that  
23 tracks how active dabigatran is in the body; right?

24 A. I think it's the best of these. I don't think the  
25 consensus of clotters is that it's ready for prime time to

1 do this with.

2 Q. Okay. Well, have you ever seen -- did Boehringer share  
3 with you the internal analysis document that they put  
4 together explaining how they got to these numbers?

5 A. I think I have seen that. I don't remember the details  
6 of it.

7 Q. Okay.

8 MR. CHILDERS: May I approach, Your Honor?

9 THE COURT: You may.

10 BY MR. CHILDERS:

11 Q. This is Exhibit Number 72 which is admitted into  
12 evidence already.

13 Do you see, Dr. Crossley, that this is called a  
14 Clinical Overview Statement, the first page?

15 A. I do see that.

16 Q. Very first page. Let me put it on here. I think for  
17 some reason we're missing a page. I just want to show the  
18 jury so they can see real quick what it's called.

19 This is a Clinical Overview Statement; right? And it's  
20 about dabigatran; correct?

21 A. Yes.

22 Q. And it's talking about the 75-milligram, 110-milligram  
23 and 150-milligram doses; right?

24 A. Okay.

25 Q. That's what it says?

1 A. Yes.

2 Q. Okay. And then it says it's for the Pradaxa prescriber  
3 guide reference document. And it says derivation of limits  
4 in coagulation tests as given in Pradaxa prescriber guides  
5 for SPAF and VTE. SPAF is atrial fibrillation; right?

6 A. Yes.

7 Q. And look at the date on this report. Do you see --  
8 this is European, so that would be July 3rd, 2011, is the  
9 way that that's written?

10 A. Yes.

11 Q. Okay. If we could go into the document, go to Page  
12 4 -- I'm sorry -- Page 5. Do you see they talk about the  
13 aPTT?

14 A. I do.

15 Q. If we turn to Page 6, the top paragraph, top two  
16 paragraphs are talking about thresholds for the aPTT test;  
17 right?

18 A. Okay.

19 Q. And it says, "It seems thus justified to consider 80  
20 seconds as a boundary beyond which patients are exposed to  
21 an increased risk of major bleeding exceeding the average  
22 probability of bleeding under INR controlled warfarin."  
23 Right?

24 A. Okay, yes.

25 Q. And you've not ever seen this before. Am I right?

1 A. I, I -- you know, I've seen so much in the last two and  
2 a half years, I can't tell you if I have seen or haven't  
3 seen this.

4 Q. Okay. And then we go down to the next paragraph and it  
5 talks about the fact that aPTT test results can vary  
6 depending on the test you run; right?

7 A. Correct.

8 Q. And because of that, instead of talking about 80  
9 seconds as the range, they're talking about using two to  
10 three times the control; right?

11 A. Yes.

12 Q. Okay. That's not --

13 A. Two to three times the upper limit I think is what it  
14 is.

15 Q. Correct. And what we saw in the label is that's  
16 actually reflected; correct? I'm sorry. The European  
17 label.

18 A. I, I don't -- I still don't think the European label  
19 recommends -- I don't think the science as a whole  
20 recommends using this as a direct test for this. I don't  
21 know anybody that uses PTT on a regular weekly, monthly  
22 basis to monitor this.

23 And, and I don't think it's thought of as a good line  
24 like it is -- I mean, with, with, with the INR in warfarin,  
25 there's a direct line. As it goes up, the anticoagulation

1 goes up. And I don't think we have the data to say that  
2 this gives us what we call a receiver operator curve that  
3 would be favorable for this test.

4 Q. This document says that this is the information that  
5 the company believes would show a patient is exposed to an  
6 increased risk of major bleeding exceeding the probability  
7 if they were on warfarin.

8 A. At 80 seconds, yes.

9 Q. Correct. And then they go on to say because that's  
10 variable, we actually need to use a, a multiplier of the  
11 upper limit of normal of the test; right?

12 A. Yeah. Again, I don't think they're trying to ascribe  
13 therapeutic levels. They're trying to describe super high  
14 levels.

15 Q. I understand that. I didn't ask you about therapeutic  
16 levels.

17 A. Well, you asked if this was what we used to monitor  
18 therapeutic levels and it's not.

19 Q. I haven't said the word "therapeutic levels" today yet  
20 until you just did. I'm asking you if this is what the  
21 company says is a measure to identify an increased or  
22 excessive bleed risk.

23 A. Yeah.

24 Q. That's what I'm talking about.

25 A. A really high aPTT, if there's no other reason for the



1 aPTT to be high, like heart failure or being on Heparin or  
2 being on warfarin, would indicate a lot of effect of  
3 dabigatran.

4 Q. And then if we turn back to Page 4, do you see that  
5 it's talking there about the diluted thrombin time, the DTT?

6 A. I do.

7 Q. And I think you just told us that's not a test that's  
8 really been shown to work. Is that what you said?

9 A. It's a test that I don't have access to. So --

10 Q. Okay.

11 A. So I have no experience with this test.

12 Q. And that's because Vanderbilt won't let you send your  
13 blood samples out to LabCorp or Quest without pre-approval?

14 A. That -- I assume that's what it is. I think a DTT -- I  
15 don't know if it can even be sent out. Many clotting tests  
16 cannot be sent out. Like you could not send out -- an INR  
17 expires in eight hours after you draw it. And I don't know  
18 what the requirements are for the DTT.

19 Q. You just have no idea?

20 A. I don't know, yeah.

21 Q. Okay. This in particular, if we look down into the  
22 body of this test, it says that the diluted thrombin time  
23 assay is a quantitative test which will provide dabigatran  
24 plasma concentration. Do you see that?

25 A. I see that.

1 Q. You just told us we can't measure dabigatran plasma  
2 concentration.

3 A. Well, that doesn't measure dabigatran plasma  
4 concentration. That's the same thing -- that measures  
5 clotting function.

6 Q. Right.

7 A. You asked me directly about measuring dabigatran plasma  
8 concentration. This doesn't measure that. This measures  
9 something that estimates, that's parallel to it. It doesn't  
10 measure what you asked.

11 Q. Understood. Let me, let me rephrase that.

12 This test, according to the company, will give a  
13 quantitative assessment of what the patient's dabigatran  
14 plasma concentration is; right?

15 A. It will give a quantitative assessment of the clotting  
16 factors, yes.

17 Q. And that -- according to the company --

18 A. That correlates -- that might correlate with the plasma  
19 concentration.

20 Q. What did the company say? It says "will provide  
21 dabigatran plasma concentration." Correct?

22 A. Yes.

23 Q. Okay. That's what I'm asking you. And then if we go  
24 down further, it says --

25 Starting here, Gina.

1 "Based on the clotting times as determined by the  
2 hemoclot assay," and you see up here that is the DTT,  
3 "concentrations of 215 in the above-mentioned studies a  
4 diluted thrombin clotting time of 65 seconds at trough is  
5 considered to represent a conservatively assessed cutoff  
6 value." Right?

7 A. Okay.

8 Q. And then it goes on to say -- and you understand that  
9 to mean -- a cutoff value is you don't want to go above it;  
10 right?

11 A. Correct.

12 Q. And then it goes on to say, "As outlined above, an  
13 assessment of the risk of bleed in a given patient should be  
14 based --" and I want you to see this part, sir -- "on the  
15 actual dabigatran concentration as determined by the  
16 hemoclot assay rather than by determining thrombin time  
17 only."

18 Do you see that?

19 A. I do see that.

20 Q. And what the company is saying is using this diluted  
21 thrombin time, you can determine the actual dabigatran  
22 concentration; right?

23 A. You can measure something that correlates with it, yes.

24 Q. According to the company?

25 A. Yes.

1 Q. Okay.

2 A. And this is the recommendation, as I understand, in  
3 Europe. And in this country, we generally follow what the  
4 U.S. Food and Drug Administration describes for us. And all  
5 of this -- I certainly wasn't there when the label was  
6 negotiated, but I'm sure there was an awful lot of data  
7 pushed back and forth. And the recommendation here was that  
8 we follow clinical factors.

9 Q. Sir, if you weren't there when any of this happened and  
10 you haven't reviewed it, how do you know?

11 A. I haven't reviewed what?

12 Q. Back and forth between the FDA and Boehringer. You  
13 haven't reviewed that, have you?

14 A. So there, there are probably a thousand drugs that I  
15 use. If your expectation that all practicing physicians be  
16 at the FDA for negotiation of those labels, you've got a  
17 really strange kind of assessment.

18 We have to rely, we have to rely on our experts that,  
19 that spend their entire lives looking at drug safety and  
20 drug monitoring to help us do what we do. And that's what  
21 our U.S. Food and Drug Administration said to do.

22 Q. Maybe I misheard you. I thought you said you were sure  
23 that the FDA considered all that information. But you  
24 weren't there; is that right?

25 A. I'm -- we don't stay -- we, we have to trust the Food

1 and Drug Administration to do their job. I do, I do trust  
2 them to do their job.

3 Q. Great. My point, sir, is only you -- because you  
4 weren't there, you can't tell us what in particular was  
5 discussed. I'm not faulting you for not being there.

6 A. No, I can't tell you that.

7 Q. Right. You have no idea what was actually discussed  
8 between the company and the FDA; right?

9 A. No, I don't.

10 Q. So if you say to us, "I'm sure the FDA did this or  
11 that," you don't actually know that?

12 A. I'm sure the FDA did their job.

13 Q. Fair enough.

14 A. Having been through a lot of FDA device discussions  
15 with them, they're very thorough.

16 Q. The device section of the FDA is different from the  
17 drug section.

18 A. It is different committees, different staff.

19 Q. Different rules; right?

20 A. A little bit different rules.

21 Q. Okay.

22 A. Similar level of scrutiny.

23 Q. You understand, Dr. Crossley, that the information that  
24 goes into the label, the warnings, the information about how  
25 to use the drug, that's a responsibility of Boehringer, not

1 the FDA; correct?

2 A. It's the result of the drug companies proposing  
3 something in a long and arduous negotiation with the FDA.

4 Q. The responsibility for maintaining the drug label is  
5 Boehringer's; correct?

6 A. Correct.

7 Q. That's not the FDA's responsibility; right?

8 A. It is the -- I will repeat what I said. The nature of  
9 what's in there comes out of a long and arduous discussion  
10 between the sponsor and the, and the agency.

11 Q. You testified -- I'm sorry. Just a minute ago, if I  
12 heard you correctly, I think you said that you practice  
13 medicine here and you follow the FDA's label. You don't  
14 look at --

15 A. I do.

16 Q. Except for those patients who are frail and you decide  
17 you want to give them a dose that's different from what the  
18 FDA label tells you.

19 A. That -- you know, it's a favorite topic of lawyers to  
20 criticize us for going off label. And we have thousands of  
21 patients in a big spectrum and the, the -- it is not a  
22 terribly infrequent thing that we have to alter, alter what  
23 we do because of specific patient factors.

24 I certainly, greater than 95 percent of the time,  
25 prescribe drugs and devices straight down the middle of the

1 road in the label. Somewhat less than that, there are  
2 reasons to do something different.

3 Q. How many times have you been criticized by lawyers for  
4 prescribing off label?

5 A. I haven't been criticized by lawyers for prescribing  
6 off label. I've just heard it.

7 Q. What are you talking about?

8 A. Well, for one, your criticism of me in the deposition.  
9 That, that was -- that, that's what comes to mind. You were  
10 pretty harsh on me for being off label in the deposition.

11 Q. Sir, we didn't talk about any off label prescribing in  
12 your deposition.

13 A. I believe -- well, one of you did. I don't remember  
14 who it was. We talked about this off label issue in great  
15 detail.

16 Q. Maybe your counsel can get up when I'm done and point  
17 that out to us, but my recollection is that never came up.

18 All right. Is it your -- I'm sorry. I want to switch  
19 gears just a bit.

20 You testified earlier that Betty's renal function, I  
21 think you said, was at the edge of severe renal impairment.  
22 And then you said those words don't mean much, though. Do  
23 you recall saying that?

24 A. What I'm trying to say is the labels we put on things  
25 like severe renal failure or end stage renal failure or

1 moderate renal failure are just -- the words don't mean  
2 much. But, but we try to ascribe specific ranges where  
3 things make sense.

4 Q. And that's what I was going to get to. What really  
5 matters is what was the actual creatinine clearance for the  
6 patient; right?

7 A. Correct.

8 Q. And in Ms. Knight's case, Betty's case, she was in the  
9 15 to 30 milliliters per minute range; correct?

10 A. Yes. Most of the time she was just around 30.

11 Q. And, in fact, --

12 A. Just under 30.

13 Q. And she fluctuated which you expect in a severe -- or  
14 a -- we don't have to use the label, but a patient who has  
15 kidney function that's around that range; right?

16 A. Especially a patient who has heart failure and kidney  
17 function around that range because that's what drives that,  
18 that difference in that range.

19 Q. And I want to make sure I, I'm clear and we're all  
20 clear. I thought I heard you say a couple things that I  
21 wasn't sure of. You're not blaming any of Betty's doctors  
22 for the fact that she was on Pradaxa; right?

23 A. No.

24 Q. Okay. And, and you told the jury you think Pradaxa --  
25 you think it was an appropriate medicine for her?



1 A. I do.

2 Q. I think you pointed out on direct examination that the  
3 Pradaxa label had been changed in January of 2012 after  
4 Betty Knight had already been started on Pradaxa. Do you  
5 recall that?

6 A. I, I -- there, there were a number of changes to the  
7 Pradaxa label over time. But I think there was one very  
8 soon after she was started.

9 Q. I'm talking about the one that you and Ms. Jones talked  
10 about during your exam. Do you recall that?

11 A. I think that -- my recollection is that was an edit  
12 that happened right, very soon after she was put on the  
13 Pradaxa.

14 Q. I think that's Exhibit Number 5884 in that binder that  
15 Ms. Jones gave you.

16 A. Yeah. That's the one I just pointed out to you from  
17 1-2012.

18 Q. Right. And in that particular label, you pointed out  
19 to us that the company added this information about P-gp  
20 inhibitors in patients with severe renal impairment right  
21 here. Pradaxa use not recommended. Right?

22 A. Correct.

23 Q. Do you agree with me that Boehringer never sent a "dear  
24 doctor" letter or any other written communication alerting  
25 Dr. MacFarland or any doctor in the United States that this

1 particular change had been made to that label?

2 A. I, I don't know their business practices as to how that  
3 is promulgated. But, I, I -- if you tell me that they  
4 didn't do that, I'll accept that.

5 Q. Well, --

6 A. I, I certainly haven't reviewed their communications to  
7 know that to be a fact.

8 Q. You were hired by their counsel to testify in this  
9 case; right?

10 A. Correct.

11 Q. One of the things you told us was you thought the label  
12 was adequate; right?

13 A. I do.

14 Q. They haven't handed you any document to show you that  
15 they ever communicated this label change through a "dear  
16 doctor" letter or any other written communication sent out  
17 to doctors; right?

18 A. I, I have not seen that communication. That's what I'm  
19 telling you. I agree with you.

20 Q. They didn't give it to you?

21 A. I agree with you. I don't know why you're --

22 Q. Okay. So I want to make sure I'm clear. When, when  
23 this change happened and there was no written communication  
24 sent out, you're not telling the jury that Betty's doctors  
25 did something wrong if they didn't know about that label

1 change when it happened, are you?

2 A. Well, we know about these label changes as much through  
3 our IT system nowadays as we do through anything else. I  
4 mean, whenever we prescribe a drug, when it goes to a  
5 pharmacy, it, it is, it goes through a pharmacy management  
6 system that spits out warnings and tells us about these  
7 contraindications. And that's how we, by and large, find  
8 out about these things.

9 We have a sort of geeky approach to that at Vanderbilt  
10 where we have a lot of conferences and we talk about things.  
11 But for most people, they find out about it that way or when  
12 a rep hands them the new label.

13 Q. Let me re-ask my question because I'm not sure you  
14 understood it. You're not telling the jury that Betty  
15 Knight's doctors did something wrong if they weren't aware  
16 of this label change when they didn't get a notification of  
17 it, are you?

18 A. I don't think they did anything wrong, period. I  
19 don't -- as I said before, I think they did a marvelous job  
20 of trying to take care of her.

21 Q. That includes every doctor who prescribed Pradaxa to  
22 her; correct?

23 A. That's correct.

24 Q. Okay. You testified earlier that Coreg is a P-gp  
25 inhibitor; right?

1 A. Correct.

2 Q. And I think you said -- again, I'm sorry if I, if I  
3 don't get this exactly right. But I think you said that you  
4 have seen data that says Coreg is a P-gp inhibitor; right?

5 A. I've seen -- yeah, lots of lists of P-gp inhibitors  
6 list Coreg as a, as a risk, or as a P-gp inhibitor I should  
7 say.

8 Q. Did you see that data before or after you were hired to  
9 be a witness for Boehringer?

10 A. Before. But Coreg is a very commonly used drug in  
11 cardiology.

12 Q. And especially -- you see it a lot with atrial  
13 fibrillation patients who are also taking Coreg; right?

14 A. Right, yeah.

15 Q. And is part of that data the Coreg label, the label you  
16 get sort of like the Pradaxa label that we're talking about  
17 here?

18 A. I, I don't remember.

19 Q. You don't know if you looked at that or not?

20 A. I don't remember -- I don't recall the details of the  
21 Coreg label. I know every time I prescribe Pradaxa and  
22 Coreg, my computer system asks me if I know what I'm doing.

23 Q. And that's at Vanderbilt?

24 A. Yes. And if it doesn't, then the pharmacy system does.  
25 And sometimes we get both warnings. But, again, her, her

1 Coreg dose was really, really low. And I think that's an  
2 important consideration in this.

3 MR. CHILDERS: Your Honor, I'm going to -- may I  
4 approach the witness?

5 THE COURT: You may.

6 BY MR. CHILDERS:

7 Q. I'm going to hand you a document that's actually  
8 Defendant's Exhibit 9027. Do you see that's the Coreg  
9 package label?

10 A. Okay.

11 Q. Do you see that?

12 A. I do.

13 Q. Can you take a look at that and tell us where it  
14 says -- or it tells a doctor, "Be careful. This is a P-gp  
15 inhibitor."

16 A. I don't see at least in the over sheet there where it  
17 says that.

18 Q. I've looked through it and I didn't see it anywhere.  
19 But certainly I'm more than happy for you to look through  
20 the whole thing.

21 A. It talks about -- excuse me. I'm sorry. It talks  
22 about CYP P450, but I don't see a discussion of P-gp.

23 Q. But it is a P-gp inhibitor; right?

24 A. It is. It's accepted.

25 Q. So if Betty's doctors looked at the label for Pradaxa

1 and the label for Coreg, that wouldn't tell them that those  
2 two medications shouldn't go together because the Coreg  
3 label doesn't tell them that it's a P-gp inhibitor; right?

4 A. At some juncture, it certainly was added to the MedX or  
5 the, the, the, the systems that the pharmacies use to warn  
6 us. But you're right. It was not in this package insert  
7 and it's not in the other.

8 And, as I said, the, the two things is the Coreg dose  
9 was very low and I don't think there's any evidence that she  
10 was ever overly anticoagulated.

11 Q. I haven't asked you that, sir.

12 A. I know you didn't.

13 Q. My question is if the doctor is prescribing Pradaxa and  
14 Coreg at the same time and they look at the labels and it  
15 says don't give Pradaxa to a severe renally impaired patient  
16 who's taking a P-gp inhibitor, how do they know that Coreg  
17 is a P-gp inhibitor? It's not in a Pradaxa label or the  
18 Coreg label; right?

19 A. Not everything we know in medicine comes out of the  
20 package insert. I mean, we, we, we -- there's a lot to  
21 learning how to be a good doctor that's not just in the  
22 package insert. And that's part of learning things.

23 I mean, I don't -- I, I would prefer it be in the  
24 package insert. But, you know, at -- and at, and at the  
25 right time it was in the Pradaxa package insert once it

1 became apparent. But I don't think everything we do in  
2 prescribing drugs comes out of the package insert.

3 Q. You understand the package insert is the warnings that  
4 the company provides?

5 A. I do understand that.

6 Q. And you understand we're here today for a failure to  
7 warn issue that has to be decided by this jury; right?

8 A. I do understand that.

9 Q. Okay. And, so, what we're talking about is the  
10 information the company, Boehringer, provides patients and  
11 doctors. And that's what we have in the label, right, the  
12 Pradaxa label?

13 A. Yes.

14 Q. Okay. So in the Pradaxa label, any of them that you've  
15 ever reviewed, did you see the word "Coreg"?

16 A. In the Pradaxa -- Coreg?

17 Q. Coreg.

18 A. I saw the word "Carvedilol" I believe.

19 Q. Great. Show it to us. Pick any label you want. And  
20 Carvedilol is the chemical name for Coreg; right?

21 A. Yeah.

22 Q. Okay.

23 A. No, it's not in there. It just says avoid P-gp  
24 inhibitors, yes.

25 Q. And so --

1 A. But, I mean, P-gp inhibitors -- if you listed all P-gp  
2 inhibitors in the label, you'd need another page and a half.  
3 I mean, we'd have to list oranges, grapes, St. John's Wart  
4 and all this other manner of stuff that's listed as P-gp  
5 inhibitors.

6 Q. Pradaxa is a medication given to patients for a heart  
7 condition called atrial fibrillation; right?

8 A. It is, uh-huh.

9 Q. And you just told us that Coreg is a very common  
10 medication given to heart patients; correct?

11 A. That's right.

12 Q. So you ought to know that's the kind of drug that is  
13 going to commonly be prescribed together; right?

14 A. That's right.

15 Q. But the label doesn't tell you that could be a problem  
16 for a patient like Betty Knight; right?

17 A. It could be a problem -- it could potentially be a  
18 problem. It needs monitoring. And this lady was monitored  
19 as well as anybody I've ever seen.

20 Q. Do you agree with me that the Pradaxa label has never  
21 said Coreg is a P-gp inhibitor; right?

22 A. Correct.

23 Q. It's never said Coreg is a drug that should be avoided  
24 in patients who have severe renal impairment and are on  
25 Pradaxa; correct?



1 A. That's correct. I don't think I've ever seen a drug  
2 label that, that involves P-gp inhibition that attempts to  
3 list all P-gp inhibitors.

4 Q. Well, the Pradaxa label does list some specifically;  
5 right?

6 A. It does some really strong ones.

7 Q. Well, it actually lists quite a few. And some of them  
8 it says don't worry about them; right?

9 A. I don't remember that part. I trust you if it is.

10 Q. Well, --

11 A. I'm sure you've looked at that more than I have.

12 Q. Coreg and Carvedilol, same thing, has never been in  
13 Pradaxa?

14 A. Correct.

15 Q. You agree with me that Coreg is a P-gp inhibitor;  
16 right?

17 A. That's correct.

18 Q. And you agree with me that the Pradaxa label does not  
19 list Coreg at all; right?

20 A. That is correct. It doesn't list Coreg and it doesn't  
21 list 150 or more other things that are there, as I said,  
22 like commonly used stuff like oranges and grapes and things  
23 that we all encounter every day.

24 Q. You agree with me that Pradaxa contributed to Betty  
25 Knight's bleed in May of 2013, don't you?

1 A. Pradaxa was one of the three drugs that she was taking  
2 when she bled.

3 Q. And you agree with me that it contributed to her GI  
4 bleed; correct?

5 A. It contributed as one of the three drugs. What I have  
6 to say in addition to that is she did well on Pradaxa  
7 without triple therapy and did poorly on Pradaxa with triple  
8 therapy.

9 Q. Let me show you your deposition, Page 235. Okay? Go  
10 to line 17.

11 A. Yeah. I, I agree with that.

12 Q. And what you said on -- my question was the same here.

13 "You believe Pradaxa did contribute to her bleed; correct?"

14 And your answer was just, "Yes."

15 That's all you said; correct?

16 A. That's right.

17 Q. And you agree with that today; correct?

18 A. I do agree with that, yes. It is an anticoagulant.

19 It's a strong anticoagulant.

20 Q. I wrote here "Pradaxa contributed to GI bleed." Is  
21 that fair?

22 A. It's fair given the boundaries of what I told you  
23 earlier. I think, I think I'm -- just trying to twist  
24 things that I'm saying a little bit is -- I'm trying to  
25 clarify it.

1 Q. Sir, that was a real straightforward question with a  
2 straightforward answer when I took your deposition; right?

3 A. The straightforward answer is she did well on Pradaxa  
4 without triple therapy. She bled on triple therapy. She  
5 did well on Pradaxa after she was off triple therapy.

6 Q. Well, when I asked you --

7 A. And, yes, it does contribute to it. It is a blood  
8 thinner. It is an effective blood thinner. And if you're  
9 bleeding and you're on Pradaxa, it's going to make you bleed  
10 worse.

11 Q. Betty did not have a GI bleed when she took Plavix and  
12 aspirin along with Coumadin in 2009; correct?

13 A. I can't tell from the record. The record reflects that  
14 she had had lots of anemia and blood loss before that. And  
15 Dr. Gunnalaugsson was poetic in the record about not wanting  
16 her on triple therapy. That's why he stopped it.

17 I don't -- I can't tell from the record whether that  
18 occurred on triple therapy. I don't think it did. I think  
19 it happened on, on the Coumadin alone or maybe Coumadin and  
20 aspirin.

21 But I can't -- there's certainly lots of references  
22 from both his record and the primary care doctor's record  
23 about prior bleeding. There's no clear -- there's no  
24 colonoscopy and proven source and all that kind of stuff.  
25 But that's why he took her off the triple therapy that

1 included warfarin was his concern about bleeding.

2 Q. Okay. So when he took -- when Dr. Gunnalaugsson took  
3 Betty off of triple therapy, as you call it, that was in  
4 March of 2009; right?

5 A. I think that's right.

6 Q. She had been on triple therapy for some period of time  
7 before March of 2009; right?

8 A. For a few weeks is all.

9 Q. Okay. The jury yesterday was told that Dr. Shami  
10 believes that Betty Knight had a bleed in November of 2008.  
11 Okay?

12 A. Yes.

13 Q. She went on triple therapy after November of 2008;  
14 correct?

15 A. That's, that's what I just said.

16 Q. Okay.

17 A. I don't know when that bleed happened. She had prior  
18 bleeding and it's not clear from the record when it  
19 happened. And I don't think it did occur on the triple  
20 therapy. But she was only on the triple therapy for a few  
21 weeks.

22 Q. She was only on triple therapy in May of 2013 for a few  
23 weeks too; correct?

24 A. That's correct, yeah.

25 Q. So --

1 A. That's, that's the way bleeding from, from that kind of  
2 source happens is it doesn't -- it's not always there. It's  
3 not a static thing. It's not like we can do an experiment  
4 and say today we gave her prune juice and she didn't bleed  
5 and tomorrow we're going to give her apple juice and she  
6 does bleed, so it must be the apple juice. It's not that  
7 simple.

8 Q. I just want to make sure that we're on the same page.  
9 When she was on triple therapy with Coumadin, you didn't see  
10 any evidence of a bleed; right?

11 A. That's correct.

12 Q. Okay. And that's the only other time she was on triple  
13 therapy until May of 2013; right?

14 A. It was a long time. I mean, your, your intestinal  
15 veins can change a lot in that number of years. What it  
16 takes to bleed is not the drug. The drug doesn't make you  
17 bleed. What makes you bleed is something in your colon  
18 bleeds and the drug makes you bleed worse.

19 And, so, she wasn't bleeding when she was on triple  
20 therapy before and she was bleeding when she was on triple  
21 therapy the second time.

22 Q. I understand. And I understand you want to advocate  
23 for your client.

24 A. I'm not trying --

25 Q. I'm asking you a question that has nothing to do with

1 that.

2 MS. JONES: I'm sorry, Your Honor. I'm going to  
3 object. I think this is becoming a little argumentative.

4 THE COURT: Well, --

5 MR. CHILDERS: It seemed very unresponsive.

6 THE COURT: I would instruct each of you to ask a  
7 proper question and give a direct answer and then move on.

8 THE WITNESS: Okay. I would take strong objection  
9 to your characterizing as advocating for my client. I'm  
10 here to tell the truth and that's it.

11 BY MR. CHILDERS:

12 Q. Okay. Tell us the truth here. This is a simple  
13 question. The only two times she was on triple therapy was  
14 in March of 2009 and May of 2013. That's my whole question.

15 A. That's correct.

16 Q. Okay. When Betty was on triple therapy with Pradaxa,  
17 she had a severe GI bleed; correct?

18 A. Yes. She had a GI bleed that was severe by whatever  
19 those words mean.

20 Q. According to her doctors, it was severe; right?

21 A. Sure. It required four units of blood transfusion. It  
22 was a big deal. That's right.

23 Q. And when Betty was on triple therapy with Coumadin, she  
24 did not have any GI bleed; correct?

25 A. That is correct.

1 Q. You reviewed records that went back beyond November of  
2 2008, earlier than that, correct, for Betty Knight?

3 A. Correct.

4 Q. And when you reviewed those records, you didn't see  
5 anything that showed you that Betty Knight had a GI bleed;  
6 correct?

7 A. I saw that she had -- there was lots of references to  
8 her having anemia and having to -- I believe she was  
9 transfused two units, if I'm not mistaken. And I don't  
10 think she ever had endoscopy proven GI bleeding.

11 When, when a lady -- when a patient like her has  
12 missing blood, as we call it, and, and is anemic for reasons  
13 that are not clear and you get transfused and it gets  
14 better, the assumption is always that it's a GI bleed.

15 Q. Sir, do you remember I asked you that same question at  
16 your deposition?

17 A. I don't remember.

18 Q. Okay.

19 A. That was a long deposition.

20 Q. I was trying to be thorough to make sure I understood  
21 all of your opinions.

22 A. Yeah.

23 Q. If you would look on Page 191 with me at line 11.

24 A. Yes.

25 Q. Do you see I asked you, "In the records you actually

1 reviewed, Ms. Knight didn't have a GI bleed in that time  
2 period while on warfarin; correct?"

3 And you answered, "That's correct."

4 Right?

5 A. Yes.

6 Q. And then I went on to say, "And that was a period of  
7 multiple years; correct?"

8 And you answered, "That's correct."

9 A. That's correct.

10 Q. That's your testimony today; correct?

11 A. That -- I, I -- perhaps I forgot about the episode in  
12 the past where there were all the references to the anemia.  
13 I don't know if she had a GI bleed. She could have had a  
14 retroperitoneal bleed or some other kind of bleed. But she  
15 certainly had somekind of bleed that got her blood count  
16 down.

17 Q. She had anemia; right? You agree with that?

18 A. Uh-huh.

19 Q. You didn't see any evidence in the records you reviewed  
20 of a GI bleed. You just confirmed that to us; right?

21 A. That's what I just said. She had anemia that got  
22 better without any therapy. I mean, the, the -- if you were  
23 to look at a differential diagnosis, which means the choices  
24 we have in explaining something, --

25 MR. CHILDERS: I would object as nonresponsive,



1 Judge.

2 THE COURT: Well, just answer his question  
3 directly.

4 THE WITNESS: Okay.

5 THE COURT: You can be asked on redirect.

6 THE WITNESS: Okay.

7 BY MR. CHILDERS:

8 Q. Do you understand you and Dr. Shami reviewed the exact  
9 same records? Did you know that?

10 A. I would assume we did. I hope so.

11 Q. Okay. You pointed out on direct two records from Dr.  
12 Gunnalaugsson that said he believes she, Betty had had a  
13 bleed while on Coumadin; right?

14 A. Correct.

15 Q. Those were from December of 2008 and March of 2009;  
16 right?

17 A. I think that's right.

18 Q. You understand that Dr. Gunnalaugsson never actually  
19 himself saw those November, 2008, records that you and Dr.  
20 Shami got to review; right?

21 A. I didn't know that. I don't know what record he  
22 reviewed.

23 Q. You read his deposition, didn't you?

24 A. I did read his deposition.

25 Q. And you recall he said, "I never actually read those

1 records." Do you recall that?

2 A. I don't recall that. I won't argue with it.

3 Q. Okay. I want to ask you about an article that you  
4 listed in your report as something that you relied on. It's  
5 by Dr. Eikelboom. Do you recall reading a couple of  
6 articles by Dr. Eikelboom?

7 A. Yes, sir.

8 Q. And the one I want to ask --

9 MR. CHILDERS: May I approach, Your Honor?

10 THE COURT: You may.

11 BY MR. CHILDERS:

12 Q. The one I want to ask you about in particular is called  
13 "Laboratory monitoring of non-Vitamin K antagonist oral  
14 anticoagulant use in patients with atrial fibrillation."

15 Do you see that?

16 A. Yes.

17 Q. It's Exhibit 3122. This is something you relied on for  
18 your opinion; right?

19 A. It's something I reviewed, certainly, and I did rely on  
20 it, yes.

21 MR. CHILDERS: May I publish this to the jury,  
22 Your Honor?

23 THE COURT: You may.

24 MR. CHILDERS: You know what. I apologize. Gina  
25 was right and I was wrong. I gave you the wrong article.

1 BY MR. CHILDERS:

2 Q. You cited two articles by Dr. Eikelboom in your report  
3 and I just gave you the wrong one. I meant to show you  
4 3124. I apologize.

5 MR. CHILDERS: May I approach?

6 THE COURT: You may.

7 BY MR. CHILDERS:

8 Q. This is the article I wanted to ask about. Sorry.

9 A. Okay.

10 Q. And this is called "Risk of bleeding with two doses of  
11 dabigatran compared with warfarin in older and younger  
12 patients with atrial fibrillation." Right?

13 A. Correct.

14 Q. Okay. If we could turn -- and you see that there are  
15 lots of authors listed here?

16 A. Correct.

17 Q. Some of them work for Boehringer, Dr. Reilly, Dr.  
18 Yusuf. All right.

19 A. I don't know Dr. Yusuf. Dr. Reilly does.

20 Q. So if we turn to Page 4 -- and I'm sorry. This is an  
21 article you relied on for your opinions; right?

22 A. Yes.

23 Q. If we turn to Page 4 there is a section that's called  
24 "Site of major gastrointestinal bleeding." Do you recall  
25 that?

1 A. I, I don't remember it directly.

2 Q. Well, if you'll look at it with me, do you agree with  
3 me that this says that patients on Pradaxa had GI bleeding  
4 that was basically fifty-fifty in the upper and lower GI  
5 tract? Do you see that?

6 A. I do.

7 Q. And then it says -- and this is from the RE-LY trial;  
8 right?

9 A. Correct.

10 Q. And it says patients on warfarin had 75 percent,  
11 75 percent of the bleeding was in the upper GI tract and  
12 only 25 percent was in the lower GI tract; right?

13 A. Yes. I remember this now.

14 Q. And, so, what this says is in the RE-LY trial patients  
15 who were on warfarin were more likely to have bleeds in the  
16 upper GI tract than patients who were on Pradaxa; right?

17 A. Yes.

18 Q. Okay. And then if we turn to Page 8 do you see there's  
19 a section that starts with -- it says "higher blood  
20 concentrations of dabigatran." Do you see that?

21 A. I do.

22 Q. Do you recall reviewing this part of the article?

23 A. I don't remember it directly. I may recall it when I  
24 read it again.

25 Q. Okay. And what they're trying to figure out is why

1 these dabigatran bleeds seem to be happening in the lower GI  
2 tract different than warfarin; right?

3 A. Yes.

4 Q. Okay. And it goes on to say that Pradaxa has low  
5 bioavailability after you take it; right?

6 A. Correct.

7 Q. And what that means is that a very small amount of the  
8 medicine actually goes into your blood system and the rest  
9 gets excreted through your intestines; right?

10 A. Correct.

11 Q. Okay. And then it goes on to say it's possible that  
12 the metabolism of the Pradaxa by esterases, if I'm saying  
13 that right, -- is that right?

14 A. Yes, esterases.

15 Q. -- esterases leads to progressively higher  
16 concentrations of the active drug during transit from the  
17 gastrointestinal tract; right?

18 A. Yes.

19 Q. And what that means is as -- they're hypothesizing that  
20 as the Pradaxa goes through the intestines, it's causing  
21 local anticoagulant effect; right?

22 A. Right.

23 Q. And then if we look onto the next page, it says, "Thus,  
24 local effects of dabigatran on diseased mucosa could account  
25 for the relative increase in lower GI bleeding seen with

1 dabigatran compared with warfarin in elderly patients in the  
2 RE-LY trial." Right?

3 A. Okay.

4 Q. Ms. Knight was an elderly patient; correct?

5 A. Sure.

6 Q. She had lower gastrointestinal bleeding; correct?

7 A. She -- that is what she had when she had her major GI  
8 bleed, yes.

9 Q. She was on dabigatran; correct?

10 A. Correct.

11 Q. Okay. Do you agree with me that the risk of a GI bleed  
12 is 50 percent higher if a patient is on Pradaxa than if  
13 they're on warfarin?

14 A. I don't know what the -- I'd have to look at the Reilly  
15 paper to look at the percentage, but it's certainly higher.  
16 The risk of GI bleeding is certainly higher.

17 Q. And you know it's higher, but you'd have to look at the  
18 Reilly article to confirm it's 50 percent?

19 A. Yes.

20 Q. Okay. Fair enough. I think the jury's already heard  
21 that, so we'll move on.

22 So you agree with me that if you're on Pradaxa, you're  
23 more likely to have a GI bleed than if you're on warfarin;  
24 correct?

25 A. That's correct.

1 Q. Okay. I want to talk to you some now --

2 MR. CHILDERS: Judge, I don't know if you wanted  
3 to take an afternoon break or --

4 THE COURT: Well, I planned to. Is this a good  
5 point?

6 MR. CHILDERS: Sure.

7 THE COURT: All right, ladies and gentlemen, we'll  
8 take about a ten-minute recess.

9 You may step down. Don't discuss your testimony.

10 THE WITNESS: Okay. Thank you.

11 THE COURT: We'll start back in about 10 minutes.

12 (Recess taken at 2:33 p.m.)

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1 (Back on the record at 2:41 p.m.)

2 THE COURT: All right. Let's bring the jury back.

3 THE COURT SECURITY OFFICER: Yes, Your Honor.

4 (Jury present.)

5 THE COURT: All right. You may be seated.

6 You may resume your cross.

7 MR. CHILDERS: Thank you, Your Honor.

8 Q. I want to talk some now about the aPTT tests and, in  
9 particular, Betty Knight. Okay?

10 A. Okay.

11 Q. And you'll recall we talked about this before.

12 Betty had some periods where she had elevated aPTT test  
13 results while she was on warfarin, correct?

14 A. Correct.

15 Q. In particular -- let me go ahead and just show you the  
16 record so that we're on the same page. Okay?

17 MR. CHILDERS: May I approach, Your Honor?

18 THE COURT: You may.

19 MR. CHILDERS: This is Exhibit 2000-2641, which is  
20 already in evidence.

21 Q. Do you see this is a lab test result from April of 2009  
22 for Betty Knight?

23 A. Correct.

24 Q. And in this particular day, you agree with me, Betty  
25 Knight was over-anticoagulated on warfarin, right?



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1 A. That's correct.

2 Q. And that day when she was over-anticoagulated, her aPTT  
3 was 62, right?

4 A. Correct. But what tells us that she's over-anticoagulated  
5 is the INR.

6 Q. Oh, I understand that.

7 We confirm she is over-anticoagulated because her INR is  
8 clearly higher than it should be, right?

9 A. Correct.

10 Q. And you agree with me that if a patient is  
11 over-anticoagulated on warfarin, that could cause the aPTT to  
12 be elevated, right?

13 A. Particularly as the INR gets up above 3 and a half or 4,  
14 the aPTT starts to go out.

15 Q. The jury -- in fact, you told the jury that earlier.

16 I think in your direct you mentioned the aPTT can go up if  
17 the INR is high, right?

18 A. That's correct.

19 Q. Yesterday the jury heard from Dr. Shami the exact  
20 opposite. She said that has nothing -- the aPTT can't be  
21 elevated by the INR.

22 She's wrong about that, right?

23 A. I would have -- that certainly is not what I was taught  
24 and not been my experience.

25 I mean, we use the aPTT -- the reason she is saying that

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1 is it's not a test that we ever use to assess the level of  
2 anticoagulation on warfarin. It's a test we use to assess  
3 anticoagulation on heparin, and so it measures something  
4 different. And so what happens with the physiology of  
5 warfarin is, as the INR gets really high, then the aPTT starts  
6 to go out.

7 Q. In this particular case with Betty Knight, it went up.

8 It went up to 62 when she was over-anticoagulated on  
9 warfarin, right?

10 A. And I don't know what else was going on here. I mean,  
11 there are other things that can make your aPTT go out, like  
12 being in terrible heart failure or something. I don't know  
13 what was going on there.

14 But it is certainly my opinion that with an aP -- with an  
15 INR in that range, it can make your aPTT go out modestly.

16 Q. Okay. And that's all I'm asking.

17 A. Yep.

18 Q. And then if you would turn one page to 2934.

19 A. 2934?

20 Q. I'm sorry. Yes. Yes.

21 Do you see this is another -- blood test results with  
22 coagulation labs that were taken in August of 2011?

23 A. Yes.

24 Q. Okay. And on this day, you agree with me that Betty  
25 Knight was over-anticoagulated on warfarin, right? Her INR

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1 was 3.7.

2 A. Correct.

3 Q. And I think you just told us with an INR over 3.5, that's  
4 where you would see the aPTT start to go up, right?

5 A. That's been my experience.

6 Q. In this particular case, Betty Knight's aPTT was 47,  
7 right?

8 A. Yes.

9 Q. And she was over-anticoagulated that day, there's no  
10 question, right?

11 A. Uh-huh.

12 Q. When Betty had her bleed, they checked her aPTT, right?

13 A. That's correct.

14 I think so. I --

15 Q. It was the day after she went into the hospital.

16 A. The day after I think, yeah.

17 Q. And if --

18 A. One or two days later is when she had an aPTT of 47 or  
19 something like that.

20 Q. That's exactly what I was going to ask you.

21 If you turn two pages in what I handed --

22 MR. CHILDERS: Gina, this is 4002.

23 THE WITNESS: You guys like small font.

24 MR. CHILDERS: I'm sorry. This is the way it comes.

25 Q. And if we look, this is a listing of blood tests that were

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1 done on May 20th and May 21st of 2013, right?

2 If you look at the dates where they're collected, right  
3 under hematology.

4 A. Okay. Yes, I see.

5 Q. And on May 21st, her coagulation parameters were checked.  
6 Do you see that?

7 A. I'm looking for them.

8 Q. It's --

9 A. Yes, I see.

10 Q. Okay. And on that day, the day after she start -- she  
11 came into the hospital with the GI bleed, her aPTT was 47 --

12 A. Correct.

13 Q. -- right?

14 Okay. And it was --

15 MR. CHILDERS: Sorry, Gina. That's okay.

16 All right. I want to shift gears just for a second.

17 Q. I think you told us earlier when you prescribe  
18 medications, you presume the FDA has done their job, and you  
19 take them at their word, right?

20 A. Sure.

21 Q. It's been your experience as a cardiologist that some of  
22 the medications that you prescribe to your patients that were  
23 approved by the FDA have been later taken off the market  
24 because of safety concerns, hasn't it?

25 A. Absolutely.

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1 Q. In particular a drug called Trasylol, did you ever use a  
2 drug called Trasylol?

3 A. I don't think so.

4 Q. Do you know what that drug was for?

5 A. I don't.

6 Q. How about Baycol, a statin drug?

7 A. Yes.

8 Q. That drug had to be taken off the market because it was  
9 causing people to have a terrible muscle condition that was  
10 also causing kidney failure, right?

11 A. Correct.

12 Q. And how about Vioxx? Did you ever prescribe Vioxx?

13 A. I don't think I ever prescribed it but, yes, I'm familiar  
14 with the issues.

15 Q. It was causing people to have heart attacks, right?

16 A. Right.

17 Q. And the FDA originally approved the medicine, but then all  
18 of those came off the market later, right?

19 A. And that's because we try to rigorously monitor drug  
20 safety as we go along. Both the companies and organizations  
21 like the organizations that I'm in try to do that.

22 Q. My question to you, though, is you've seen instances on  
23 more than one occasion where a drug was approved, and then  
24 later it was determined it was unsafe, right?

25 A. Sure.

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1 Q. Okay. I want to ask you a little bit about the home  
2 health care records that you reviewed. I think they're in  
3 that big binder that Ms. Jones gave you. It's tab No. 9013A.

4 Do you see that?

5 A. I'm looking. I'll get there.

6 Q. It's at the very back. It's a big binder.

7 A. Give me a second.

8 Q. No problem.

9 A. I just destroyed this.

10 Q. No problem.

11 A. What did you say, what tab?

12 Q. The very last tab, 9013A I think it says.

13 A. Okay. The next to last one.

14 Q. These are the home health records?

15 A. Okay.

16 Q. I'm sorry. I don't mean to be a pain.

17 Is that a yes?

18 A. Yes.

19 Q. Okay.

20 A. Yes.

21 Q. And so you reviewed these, right?

22 A. I did.

23 Q. And you talked about some of them with Ms. Jones, right?

24 A. I did.

25 Q. Okay. I want to ask you about one in particular.

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1 A. Okay.

2 Q. If you would turn with me to page 1264. You see that?

3 MS. JONES: Mr. Childers, this is not an objection,  
4 but I don't think we actually looked at this. It might need  
5 to be moved in if you are going to use it. I don't think we  
6 actually moved this exhibit just so you know.

7 MR. CHILDERS: Fair enough.

8 Your Honor, I'm going to move Exhibit 9013 into  
9 evidence. These are a subset of the records that are already  
10 in evidence.

11 THE COURT: Okay. Any objection?

12 MS. JONES: No, Your Honor.

13 THE COURT: 9013A is admitted.

14 MR. CHILDERS: Thank you, Your Honor.

15 (DEFENDANT'S EXHIBIT 9013A ADMITTED INTO EVIDENCE.)

16 MR. CHILDERS: If we could look at page 1264.

17 THE WITNESS: I'm there.

18 MR. CHILDERS: Okay.

19 Q. Do you see that the date on this home health record is  
20 November 16th, 2011?

21 A. I do.

22 Q. That's a little less than a month after Betty Knight was  
23 first prescribed Pradaxa, correct?

24 A. I think that's correct.

25 Q. And it notes in the record that her medication has changed

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1 since the last visit, right?

2 A. Ah --

3 Q. And if you want to look on the screen, it may help you  
4 because it's such small print.

5 A. Yes.

6 Q. Okay. And then if we look further down the page, there is  
7 a section called Drug Regimen Review.

8 Do you see that?

9 A. Yes.

10 Q. I'm sorry. Above that, Medications Review, do you see  
11 that?

12 And it says the medication regimen review was completed,  
13 right?

14 A. Okay.

15 Q. They checked off yes, right?

16 A. That's correct.

17 Q. Okay. And then if we go further down in the section  
18 called Drug Regimen Review, it says: Does a complete drug  
19 regimen review, indicate potentially clinically significant  
20 medication issues, drug reaction and effective drug therapy,  
21 side effects, drug interactions, duplicate therapy, omissions,  
22 dosage errors or noncompliance.

23 You see that?

24 A. That's correct.

25 Q. And at this time, the label for Pradaxa that Ms. Knight



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1 would have picked up with her first prescription didn't say  
2 there was any interaction with P-gp inhibitors and Pradaxa in  
3 a patient like her, right?

4 A. That's correct.

5 Q. Okay. And it says no problems found during the review,  
6 right? And that's what you would expect based on that label,  
7 correct?

8 A. Correct.

9 Q. All right.

10 A. I certainly -- I mean, I wouldn't typically rely on home  
11 health to guide drug-drug interactions.

12 Q. Well, it says they reviewed the medication regimen, right?

13 A. It does, yeah. And so when my medical assistant reviews  
14 it, it says she's reviewed it. But I'm just saying I -- I  
15 wouldn't rely on home health as a big authority in drug-drug  
16 interactions.

17 We depend on home health to help with the things we  
18 prescribe home health for, not --

19 Q. In this particular case, this is something that this  
20 particular record says they actually looked at, right?

21 A. I -- and I have no idea what -- I've never seen this in a  
22 home health record, having looked at thousands of home health  
23 records, so I'm unfamiliar with home health doing that. And I  
24 have no idea what depth -- into what depth they looked for  
25 that.

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1 Q. You reviewed --

2 A. That's all I'm trying to convey.

3 Q. You reviewed this record before?

4 A. I did.

5 Q. So you saw before that the home health provider said she  
6 got a new medication right after the Pradaxa prescription, and  
7 that they went over it to see if there were any drug-drug  
8 interactions, right?

9 A. Yes.

10 Q. Okay. And then if we turn to the following page, which is  
11 2165, it says: Patient caregiver high-risk drug education.

12 Do you see that?

13 A. Yeah.

14 Q. And in particular, this section says we need to go over it  
15 again if it's a high-risk drug, and it specifically -- excuse  
16 me -- lists anticoagulants, right?

17 A. Correct.

18 Q. And Pradaxa is an anticoagulant, right?

19 A. Yes.

20 Q. And then it checks off yes, we did that.

21 A. And that is something we would typically expect home  
22 health nurses to do.

23 Q. Okay. And that would be based on the risks that they're  
24 aware of based on the materials they got from -- with the  
25 medicine, right?

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1 A. Sure.

2 Q. And then if we go -- one, two -- three pages farther, page  
3 1268, there's a section called Interventions Instructions,  
4 correct?

5 A. Yes.

6 Q. In the very last sentence it says: Patient and caregiver  
7 instructed on high-risk med Pradaxa for -- I'm not sure what  
8 TX stands for -- with anticoagulation, right?

9 Is that what it says?

10 A. Yes.

11 Q. It specifically says we talked about Pradaxa, right?

12 A. Yes.

13 Q. And it says: Patient and caregiver verbalized  
14 understanding of education provided, E-D.

15 The last two letters --

16 A. Provided.

17 Q. Provided. Excuse me.

18 And so they not only talked about it, they said we  
19 understand it, right?

20 A. Correct.

21 Q. And then if we turn one more page, page 1269, do you see  
22 there's a section at the very bottom that says Written  
23 Instructions, Materials Provided?

24 A. Yes.

25 Q. And it says -- it has checked off every single one of the

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1 items that are underneath there were -- written materials were  
2 provided to her, correct?

3 A. Correct.

4 MR. CHILDERS: Okay. Thank you, Gina.

5 Q. Based on that, you were fully aware that Ms. Knight and  
6 her caregiver reviewed the information not only themselves  
7 that they were given with the first Pradaxa prescription, but  
8 actually went over it with their home health care provider,  
9 correct?

10 A. Correct.

11 Q. Thank you.

12 I want to shift gears again and talk about Betty's health  
13 after she had the bleed. Well, let's start with the time of  
14 the bleed.

15 You agree that her bleed would have been considered to  
16 be -- I'm sorry. I'll let you finish that.

17 A. I'm sorry. I'm just trying to put it back together so it  
18 doesn't explode on me again.

19 Q. That's not a problem.

20 A. I'm done.

21 Q. You agree with me that the bleed that Betty had, if she  
22 had been a patient in the RE-LY trial, would have been  
23 considered or classified as life-threatening?

24 A. That was the definition in the RE-LY trial. That  
25 is not -- as I -- you know, the word is sort of arbitrarily

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1 defined there.

2 Q. And you reviewed Dr. Abdelgaber's deposition, right?

3 A. I did.

4 Q. And you saw that when he was asked if he thought her life  
5 was in danger, he said that's why I admitted her to the  
6 hospital, right?

7 A. Yes.

8 Q. Okay. And then you read the discharge summaries from both  
9 the hospital and the skilled nursing facility, right?

10 A. I did.

11 Q. And both of those said Betty Knight had a severe  
12 gastrointestinal bleed, right?

13 A. Correct. She -- it required four units of transfusion, as  
14 I recall.

15 Q. You don't disagree with anything that you read in the  
16 deposition or in the medical records about the severity of the  
17 bleed, do you?

18 A. I don't know if you're implying something else other than  
19 what I just said. I'm not trying -- I don't know -- I'm  
20 reluctant to give you a blanket endorsement that I agree with  
21 all thousand words. But --

22 Q. Let me try to be more clear, and I apologize for that.

23 A. Okay.

24 Q. We were just talking about the fact that Dr. Abdelgaber  
25 said he felt her life was in danger, so he put her in the

1 hospital.

2 A. Correct.

3 Q. And then the discharge summaries said it was a severe  
4 bleed. I am only confined to that.

5 You don't disagree with those things, do you?

6 A. I don't disagree with that, no.

7 Q. Okay.

8 A. The --

9 Q. You agree with me that having a GI bleed is a big blow to  
10 anybody and especially a big blow to an elderly female  
11 patient?

12 A. Certainly.

13 Q. You agree with me that Betty Knight's GI bleed was a big  
14 blow to her?

15 A. Correct.

16 Q. You agree with me that Betty Knight was more debilitated  
17 after that bleed than she was before the bleed?

18 A. I'm not sure that I can say that from the record. I mean,  
19 she was pretty debilitated before. She was in and out of  
20 nursing homes and had lots of medical care. It's hard to  
21 discern that from the medical record.

22 She was certainly debilitated. She had lots of things  
23 going on.

24 Q. My question is simply, you agree with me that she was more  
25 debilitated after the bleed than she was before the bleed?

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1 A. I don't know the answer to that, that's what I'm saying.

2 Q. Look with me, if you could, on page 211 of your  
3 deposition.

4 A. Okay.

5 Q. Do you see, starting at line 10, the question I asked you  
6 was: The reason she was admitted to the skilled nursing  
7 facility immediately following the bleed hospitalization was  
8 debility as a result of the GI bleed, correct?

9 And then you answered: It was debility. I think much of  
10 her debility was there long before the GI bleed. I'm sure she  
11 was more debilitated after the GI bleed than she was before,  
12 but certainly she was not in good health before the GI bleed.

13 A. I don't disagree with that at all.

14 Q. And so my question to you is, she was worse --

15 A. The day she went home, she was certainly worse. I  
16 don't -- what I can't -- what I'm trying to say is, if we look  
17 at six months before and six months after, it's hard for me to  
18 know what is -- how much the GI bleed contributes to that.  
19 Certainly her course shows that her cardiovascular disease was  
20 galloping and contributed greatly to what was going on with  
21 her at the end of her life.

22 Q. And when we're trying to determine if something affects a  
23 person's death, sometimes we call that mortality, right?

24 A. Yeah.

25 Q. Okay. And mortality means -- tell me what mortality means

1 to you in the medical context.

2 A. It's just the rate at which people die.

3 Q. Okay.

4 A. In a clinical study, if that's what you're asking.

5 Q. Yes, sir.

6 A. Mortality is it applies to a specific patient, obviously  
7 has a specific diagnosis, a specific issue.

8 Q. As far as whether or not Betty's GI bleed affected her  
9 mortality or her death, you don't have an opinion, do you?

10 A. I'm not sure what you're asking there.

11 I'm sure that in the end, her death was related to her  
12 coronary disease. And all of the records toward the end of  
13 her life showed that she had progressive angina and  
14 progressive heart failure, and that contributed to it.

15 I don't think there's any evidence anywhere that the  
16 bleeding contributed to things that ultimately caused her  
17 death. I think the cardiovascular disease is what ultimately  
18 caused her death, if that's what you're asking me.

19 Q. I'm asking about whether or not you have an opinion, which  
20 I don't believe you do, as to whether or not Betty's GI bleed  
21 had any impact on her mortality.

22 A. I don't think it did.

23 Q. Okay. Let me look with you at your deposition, page 259.

24 If you look with me at line 15, do you see that I asked  
25 you: But it is not your opinion that the GI bleed that caused



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1 her to be hospitalized, and then in a skilled nursing facility  
2 for three weeks, significantly impacted her mortality?

3 And your answer was: I think I would leave that up to an  
4 official assessment of what her functional status was there.  
5 The MI leaves you with a scar on your heart, and you have much  
6 more risk of having sequelae than a GI bleed does.

7 Right?

8 A. That's correct.

9 Q. And then when we went on to talk about it, you told me  
10 that you would defer that opinion to an expert --

11 A. So --

12 Q. -- because you're not an expert on functional assessment,  
13 right?

14 A. That -- that is correct.

15 What I'm trying to express here is that if I were to  
16 measure her debility before the GI bleed and after, I'm not  
17 the one to measure that. I'm not trying to say that the GI --  
18 that I don't have any idea whether the GI bleed killed her.  
19 I'm talking about her level of debility before the GI bleed  
20 and after. That's what I'm referring to.

21 Q. We were talking about mortality, right?

22 A. No, I'm talking about debility. That's what I'm saying  
23 here.

24 Q. Well, the question I asked you was mortality, right?

25 I didn't say debility. I said did the GI bleed and

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1 skilled nursing facility stay for three weeks impact her  
2 mortality.

3 That was the question I asked you, right?

4 A. I answered the wrong question, then. Because what I was  
5 answering is her debility before and after, and I went on to  
6 describe the way a myocardial infarction kills you.

7 Q. Okay. Well, then you must have misunderstood me the next  
8 three questions I asked. Let's look at them.

9 I said on --

10 A. Tell me what page first.

11 Q. Page 260, line 11.

12 I asked: When you say you would leave -- I asked you a  
13 question about her mortality, I didn't say debility there.  
14 You would leave how the GI bleed affected her mortality up to  
15 a functional assessment.

16 And your answer was uh-huh, meaning affirmative, correct?

17 A. Yes.

18 Q. And then I asked you another question: How would a  
19 functional assessment impact what her mortality was.

20 Correct?

21 And you said: In any 80-year-old, your functional  
22 assessment of how you can take care of yourself, whether you  
23 get dysthymic walking across the room, all that kind of stuff  
24 is a much better predictor of your mortality than most other  
25 things would measure.

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1 Right, that's what you said?

2 A. Again, what I'm trying to express there is the effect --  
3 you were -- it was my impression that you were trying to get  
4 me to say that I thought her debility from the GI bleed is  
5 what killed her. And what I was saying is I would leave that  
6 up to a functional assessment by a gerontologist or something.

7 Q. Sure.

8 A. What I do -- what I am confident in is that her coronary  
9 disease was galloping. She kept having unstable angina, she  
10 had an acute myocardial infarction, and she died of a  
11 ventricular arrhythmia or whatever it was that caused her  
12 cardiac arrest.

13 Q. And whether the bleed played any part in her mortality,  
14 you said you'd leave that up to a functional assessment by  
15 somebody else, right?

16 A. Correct.

17 Q. And you told me that you would leave that up to a person  
18 named Dr. Gill, right? Is that what you told me?

19 A. Yes.

20 Q. Dr. Gill is someone who was hired by Boehringer to be a  
21 witness in this case, too, right?

22 MS. JONES: Excuse me, Your Honor. May we approach  
23 for --

24 THE COURT: Yes.

25 (Bench conference, reported.)

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1 THE COURT: Okay. What's your objection?

2 MS. JONES: Well, I don't think it's appropriate to be  
3 asking Dr. Crossley about Dr. Gill and whether he's here and  
4 what Dr. Gill may or may not have said.

5 I've allowed Mr. Childers to read directly from the  
6 deposition, which I think is probably inappropriate. I think  
7 he has made his point. I don't think we need to talk about  
8 what some other expert did or didn't say. What does that have  
9 to do with anything?

10 MR. CHILDERS: He's testified that he thought the  
11 bleed didn't have anything to do with her death. Clearly he  
12 said that in his deposition. He said, I think she died from a  
13 heart attack. Whether the bleed had anything to do with it or  
14 contributed, I'll leave that up to someone else.

15 They have an expert, Dr. Gill. I asked him who he  
16 would leave that up to. He said Dr. Gill. He's not here to  
17 testify, so I think it's important for the jury to know he's  
18 not here saying anything about whether the bleed contributed  
19 to it or not. He left it up to somebody else.

20 THE COURT: He's already testified that he didn't make  
21 a decision, he didn't have an opinion. I think that's as far  
22 as you can go.

23 MR. CHILDERS: Okay. Yes, sir.

24 (Bench conference, concluded.)

25 MR. CHILDERS: Doctor, I want to just make sure I'm

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1 clear.

2 Q. As far as whether or not the bleed contributed to Betty  
3 Knight's death, that's not an opinion that you formed one way  
4 or the other.

5 You left that up to others, correct?

6 A. Whether she was -- whether the -- it was my understanding  
7 from your questioning with me that you were trying to get me  
8 to say that I felt like she was much worse off after the GI  
9 bleed, and she died of sort of debility as a result of being  
10 hospitalized and the GI bleed itself.

11 And what I said is I would leave that up to a -- to a  
12 gerontologist that I expected -- that I thought was going to  
13 be a part of the case.

14 Q. That's all I'm asking. And I think we probably should  
15 stop there.

16 THE COURT: I agree.

17 THE WITNESS: Okay.

18 MR. CHILDERS: Thank you, Your Honor.

19 Q. The jury did hear about Betty's condition after the May  
20 2013 bleed from Dr. Abdelgaber, who actually treated her,  
21 right?

22 You know that, right?

23 A. Yes.

24 Q. And you read that deposition, right?

25 A. I did.

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1 Q. In fact, we played it for the jury last week.

2 You know that Dr. Abdelgaber testified that Betty did not  
3 seem to ever get better or bounce back from the May 2000 GI  
4 bleed -- I'm sorry -- from the May 2013 GI bleed, correct?

5 A. I don't -- I don't recall his ascribing causation. I  
6 recall his saying she never bounced back.

7 Q. You recall he testified that she did not seem to ever get  
8 better or bounce back from the May 2013 GI bleed, right?

9 A. It was my understanding, as I said, that he was saying  
10 that she never got better after the bleed. I don't -- I don't  
11 recall his ascribing causation to the bleed.

12 Q. That's not my question, sir.

13 My question is he said --

14 A. Well -- okay.

15 Q. Okay. And I want you to -- I promise you, if you listen  
16 to my question, it will go faster.

17 You know that he testified -- and I'm giving you a direct  
18 quote from his testimony -- that Betty did not seem to ever  
19 get better or bounce back from the May 2013 GI bleed.

20 That's what he testified, right?

21 A. And I'm absolutely sure she did not bounce back. There is  
22 lots of data in the record, as I've said, to say that the not  
23 bouncing back was because of her coronary disease, because of  
24 her progressive heart failure, her progressive angina and  
25 heart -- heart attacks.

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1 Q. Well, you don't disagree with Dr. Abdelgaber, do you?

2 A. No, I don't think she bounced back.

3 Q. Okay.

4 A. I think there was a lot going on with Betty.

5 Q. And in particular, the question that he -- or the  
6 statement that he made was that she didn't seem to bounce back  
7 after the May 2013 GI bleed.

8 That's all I'm asking. That's what he said.

9 A. She certainly didn't bounce back after that.

10 Q. Okay.

11 MR. CHILDERS: May I have just a moment, Your Honor?

12 THE COURT: Yes.

13 (Plaintiffs' counsel conferring.)

14 MR. CHILDERS: I don't think there is a lot of room  
15 here on this paper, but I want to write one more thing. Okay?

16 Six, defers opinion -- I spelled that wrong, sorry --  
17 about GI bleed's effect on her mortality.

18 Q. That's what you just told us, right?

19 A. That is a bit of a twist in what I said.

20 What I said is that she definitely didn't bounce back  
21 after the GI bleed. But in that time period, she had all of  
22 the signs and symptoms and clinical findings of galloping  
23 coronary disease that I really feel was the cause of her  
24 death. That's what I'm saying.

25 Q. And whether or not the bleed contributed to her death is

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1 something that you're deferring, right?

2 A. Right.

3 Q. Okay.

4 MR. CHILDERS: Your Honor, I think that's all I have.

5 THE COURT: All right. Redirect?

6 MS. JONES: Yes, Your Honor. Thank you.

7 Could I just have a couple of minutes to --

8 THE COURT: Yes. Go ahead.

9 You folks can stand up and stretch if you like, take a  
10 minute.

11 (Pause in proceedings.)

12 THE COURT: All right. Ms. Jones, whenever you're  
13 ready.

14 MS. JONES: Thank you, Your Honor.

15 Dr. Crossley, I just had a handful of follow-up  
16 questions on some of the topics that Mr. Childers covered with  
17 you on cross-examination. Okay?

18 THE WITNESS: Great.

19 MS. JONES: All right.

20 REDIRECT EXAMINATION

21 BY MS. JONES:

22 Q. I probably will go in about the order he went in, which  
23 was to start with this exchange that you all had on whether or  
24 not you testified about whether it would have been okay for  
25 Mrs. Knight to stay on warfarin back in 2011.



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1 Do you remember that exchange?

2 A. Oh, yes.

3 Q. And do you remember him showing you testimony from your  
4 deposition in November of 2017 related to that issue?

5 A. Yes.

6 Q. Okay. I'm going to ask you to turn to page 216 of your  
7 deposition.

8 A. Two one six?

9 Q. Two one six.

10 MR. CHILDERS: Your Honor, I don't think it's proper  
11 to impeach your own witness.

12 MS. JONES: I'm not.

13 THE COURT: Well, what are you asking him to refer to  
14 the deposition for?

15 MS. JONES: May we be heard at side bar, Your Honor?

16 THE COURT: Yes.

17 (Bench conference, reported.)

18 MS. JONES: First of all, I'm not impeaching my own  
19 witness. No one will be surprised to hear that.

20 He was purportedly impeached with 216, 3 through 7, on  
21 whether or not it would have been appropriate for her to stay  
22 on warfarin. I'm permitted to go back and read the balance of  
23 his testimony where he said -- he was asked: So I'm asking  
24 you, you could substitute Xarelto, Eliquis or warfarin for  
25 that, correct?

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1 And he answered: You could, though I do think I would  
2 have done the same thing her physicians did. I think they  
3 took good care of her.

4 I'm permitted to do that after he purportedly  
5 impeached him. That is permitted.

6 MR. CHILDERS: I think that should be done at the time  
7 if that was the issue. This is redirect.

8 Also, Your Honor, I don't think that's -- those are  
9 two different questions.

10 MS. JONES: No, they're the same concept.

11 MR. CHILDERS: If she wants to ask him the question,  
12 she can. It's improper to read the deposition.

13 THE COURT: I think you can ask him the question and  
14 ask if he remembers an answer to it. You can refresh his  
15 recollection by letting him look at it and see if he can  
16 testify to it.

17 I think they're entitled to bring out statements that  
18 are consistent with his testimony when you have cross-examined  
19 him about inconsistencies or shown statements inconsistent.  
20 So I understood at the beginning that's what you were talking  
21 about.

22 MS. JONES: Yes, Your Honor.

23 MR. CHILDERS: Okay.

24 THE COURT: Okay.

25 MS. JONES: Thank you.

1 (Bench conference, concluded.)

2 MS. JONES: Sorry for the brief interruption.

3 Q. Are you still on page 216 of your deposition?

4 A. I am.

5 Q. Okay. And do you recall the exchange that you had with  
6 Mr. Childers about this Q and A on line 3 to line 7 regarding  
7 whether it would have been appropriate for Mrs. Knight to stay  
8 on warfarin in 2011?

9 A. I do.

10 Q. Okay. If you look a little further down, do you also  
11 recall being asked: So I'm asking you, you could substitute  
12 Xarelto, Eliquis or warfarin for that, correct?

13 And you answered: You could, though I do think I would  
14 have done the same thing her physicians did. I think they  
15 took good care of her.

16 Do you recall that testimony?

17 A. I do.

18 Q. And is that the point you were making earlier on  
19 cross-examination?

20 A. It is.

21 Q. And could you just explain what you meant by that?

22 A. What I meant is that while warfarin is not outside the  
23 standard of care, any of the NOACs would provide superior  
24 stroke prevention. And Ms. Knight had tremendous risk of  
25 stroke, and the most important thing we could do is keep her

1 from having a big stroke.

2 And any of the NOACs would have been fine. I would have  
3 preferred, strongly preferred to use the NOACs. And if forced  
4 to use warfarin, that would have been within the standard of  
5 care.

6 Q. And was that your testimony when you were deposed in 2017?

7 A. It was.

8 Q. Okay. You were asked some questions about something  
9 called GERD; do you recall that?

10 A. Yes.

11 Q. And I'm not sure that the jury has even heard what GERD  
12 is.

13 What is GERD just --

14 A. Gastro -- excuse me. I didn't mean to step on you there.

15 Q. That's okay. Go ahead.

16 A. She'll shoot me.

17 Q. That's not true.

18 A. Gastroesophageal reflux disease.

19 We've all had indigestion, and so as it applies to this,  
20 certainly -- there is two -- two is two important aspects of  
21 that. Number one, people with GERD probably have a little bit  
22 more GI bleeding because they have stuff wrong in their  
23 stomach. That was not -- that did not apply to Mrs. Knight,  
24 and she appeared to be bleeding from her colon.

25 And, number two, people with GERD that take Pradaxa

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1 sometimes get more GERD. And I think the number was 15  
2 percent of the people in the clinical trial, it may be a  
3 little less than that, had GERD.

4 And so it's not that you're damaged if you take Pradaxa,  
5 and you have more GERD. It's that if we gave you Pradaxa, and  
6 you got more indigestion, we would switch you to one of the  
7 other drugs. And even if your insurance said that's the only  
8 one you could get, then we can get special dispensation in  
9 that case because you have worse GERD.

10 That's what I was trying to say.

11 Q. And, Dr. Crossley, just to talk specifically about Mrs.  
12 Knight, would you see any indication in her medical records  
13 that she had a problem with Pradaxa somehow worsening her  
14 GERD?

15 A. I did not see that.

16 Q. Okay. Did you have any reason to believe, based on your  
17 review of her medical records, that the fact that she had GERD  
18 and took Pradaxa somehow contributed to her having a  
19 gastrointestinal bleed?

20 A. Certainly not. Again, the bleed was a colonic bleed,  
21 proven by the fact that they clipped it, and the bleed  
22 stopped.

23 Q. Let me --

24 A. They did -- they did see some gastritis at the time they  
25 scoped her from above, but there was no evidence that that was

1 contributing to the bleed.

2 Q. You were asked some questions very early on in  
3 cross-examination about television advertising for medicines.

4 Do you recall that?

5 A. I do.

6 Q. And you were asked some questions about patients coming to  
7 you and asking for specific medicines based on having seen  
8 things on television.

9 Do you recall that?

10 A. I do.

11 Q. Have you ever, when a patient suggested a medicine based  
12 on something they saw on TV, just written a prescription  
13 without forming your own medical judgment about whether that  
14 was an appropriate medication for the patient?

15 A. Heavens no. Not -- not one time.

16 Q. Okay. And let me ask you about this topic of what  
17 prompted Mrs. Knight's transition to Pradaxa in 2011.

18 In front of you, you still have your black binder --

19 A. I do.

20 Q. -- the one that was falling apart, for which I apologize.

21 A. I did it. So --

22 Q. I'm going to ask you to go to 9009B at page 580.

23 MS. JONES: And I apologize, Your Honor. I don't  
24 remember if this is something that was -- if this specific  
25 excerpt has been admitted or not, but the record we're showing

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1 is -- I'm told it has been admitted.

2 THE COURT: All right. You may proceed.

3 MS. JONES: Thank you.

4 Q. Dr. Crossley, have you seen what we have on the screen  
5 here?

6 A. Yes.

7 Q. Do you recognize this as the prior authorization form that  
8 had to be completed by Dr. MacFarland's office to actually  
9 reflect what she thought was the reason that Mrs. Knight was  
10 an appropriate candidate for moving from warfarin onto  
11 Pradaxa?

12 A. Yes, I do.

13 Q. And do you have experience filling out paperwork like this  
14 for your patients?

15 A. Oh, yes.

16 Q. Yeah. Okay.

17 If we go to the second page of that record, which is on  
18 page 581, you see up at the top of the page, it says: Other  
19 medications/therapies tried and reasons for failure and/or any  
20 other information the physician feels is important to review.

21 Do you see that?

22 A. Yes.

23 Q. And what is that section supposed to include in a form  
24 like this?

25 A. Just the reason that you want to use a restricted drug or

1 a non-formulated drug.

2 Q. Okay. And what Dr. MacFarland's office reported was that  
3 patient, Mrs. Knight, was sporadic and supratherapeutic on  
4 coumadin since 2008 until the present.

5 Do you see that?

6 A. I do.

7 Q. And is that consistent with your understanding of the  
8 medical records related to Mrs. Knight's care on warfarin  
9 prior to her move to Pradaxa?

10 A. It is.

11 Q. You were asked some questions about the 75-milligram dose  
12 of Pradaxa.

13 You said on direct examination you prescribe the  
14 75-milligram dose of Pradaxa; is that correct?

15 A. That's correct.

16 Q. Do you prescribe it to patients who have severe renal  
17 impairment?

18 A. Yes.

19 Q. And I take it just based on what you've told the jury  
20 today, you take the care of your patients seriously; is that  
21 right?

22 A. That's correct.

23 Q. Would you prescribe the 75-milligram dose of Pradaxa to  
24 patients with severe renal impairment based on your experience  
25 as a cardiologist over many decades, would you do that if you



1 didn't believe it was an appropriate option for patients who  
2 have anti -- excuse me -- atrial fibrillation?

3 A. No, I certainly wouldn't.

4 Q. Okay. And have you had patients who were successfully  
5 treated with the 75-milligram dose of Pradaxa?

6 A. Yes.

7 Q. You were asked some questions about this issue of blood  
8 monitoring, and you were shown the European label by  
9 Mr. Childers.

10 Have you had experience as a clinician treating patients  
11 with the medicines Pradaxa and the other NOACs, Xarelto and  
12 Eliquis, without blood monitoring?

13 A. Yes.

14 Q. Were those medicines approved by the FDA without blood  
15 monitoring?

16 A. Yes.

17 Q. And have you been able to treat your patients safely and  
18 effectively with those medicines without blood monitoring?

19 A. I have.

20 Q. Have you seen anything in the records to suggest that Mrs.  
21 Knight's experience with Pradaxa would have been different if  
22 she had had blood monitoring?

23 A. I have not.

24 Q. Okay. And I want to ask you about a couple of things that  
25 were raised on cross-examination in connection with the doctor

1 label for Pradaxa.

2 Do you have 5884 in front of you?

3 A. Eight eight?

4 Q. Yes.

5 A. Okay.

6 Q. Do you recognize that as the January 2012 --

7 A. I do.

8 Q. -- label?

9 One thing you were asked about was whether there is  
10 information in Europe versus in the United States about  
11 clotting tests like the aPTT or the ECT.

12 Do you remember that?

13 A. I do.

14 Q. Okay. And if you turn in 5884 to page 5, do you see a  
15 section there that is called Clinical Pharmacology.

16 A. I do.

17 Q. And does that section of the -- and just to be clear,  
18 we're looking at the U.S. or American label for doctors; is  
19 that right?

20 A. That's right.

21 Q. Okay. And this section is called Pharmacodynamics.

22 Does this section actually discuss the use of clotting  
23 tests like the aPTT and the ECT and the TT in patients who are  
24 on Pradaxa?

25 A. It does.

1 Q. Okay. So, for example, the very first line of that  
2 section on pharmacodynamics says: At recommended therapeutic  
3 doses, dabigatran etexilate prolongs the coagulation markers  
4 such as aPTT, ECT and TT.

5 Do you see that?

6 A. I do.

7 Q. And just simplify that for us. What does that mean  
8 exactly?

9 A. It just means that those tests become abnormal when you  
10 are on dabigatran.

11 Q. And does that mean that the time that you see reflected in  
12 those tests will be higher if you're on --

13 A. Will be longer.

14 Q. -- Pradaxa?

15 A. Yes.

16 Q. Longer. Okay.

17 A. That's right.

18 Q. And that's because Pradaxa and other oral anticoagulants  
19 slow down the time it takes for your blood to clot?

20 A. That's correct.

21 Q. Okay. And in that next sentence, there's a reference to  
22 the aPTT -- I'm sorry, Mr. Reynolds, the next paragraph -- the  
23 aPTT test provides an approximation of Pradaxa's anticoagulant  
24 effect.

25 Do you see that?

1 A. Yes.

2 Q. And then it goes on to discuss some information on that  
3 issue, including information in that very last sentence about  
4 the median trough aPTT in patients receiving the 150-milligram  
5 dose of Pradaxa.

6 Do you see that?

7 A. I do.

8 Q. So the U.S. label for doctors communicates information  
9 about the aPTT and the ECT and the TT; is that right?

10 A. It does. And it shows you the curve there for her  
11 creatinine clearance is very similar to what we saw in that  
12 PTT that was elevated on Ms. Knight.

13 Q. Okay.

14 MS. JONES: Actually, Mr. Reynolds, can we just show  
15 that chart right below that. Yeah, the aPTT time course.

16 Q. Is this what you were referring to, Doctor?

17 A. It is --

18 Q. Okay.

19 A. -- yeah.

20 Q. And just explain what this is.

21 A. What that shows is the top bar there is the bar that would  
22 have applied to Mrs. Knight with a creatinine clearance less  
23 than 30. And it shows out at 24 hours, we would expect the  
24 PTT to be in the 60 range. And at 48 hours, we would expect  
25 it to be in the 55 range as that PTT is -- as that test is

1 going away.

2 So that is actually a number that is higher than what we  
3 saw in Ms. Knight.

4 MS. JONES: We can take that down. Thank you,  
5 Mr. Reynolds.

6 I want to turn now to two other topics, one relating  
7 to Mrs. Knight's GI bleed, and the other relating to Mrs.  
8 Knight's passing in April -- excuse me -- in September of  
9 2013.

10 Q. You were asked some questions about whether or not Pradaxa  
11 contributed to Mrs. Knight's bleed in May of 2013.

12 Do you recall that?

13 A. I do.

14 Q. Can you rule out the possibility that had Mrs. Knight been  
15 on warfarin at that time, that it would have equally  
16 contributed to her bleed?

17 A. I don't -- I don't know of any reason to think it would  
18 have been any different. I mean --

19 Q. And why is that?

20 A. Because on triple therapy, you just have more bleeding. I  
21 mean, when we're faced with a patient like Ms. Knight, and we  
22 have to use triple therapy, we just gird out loins, and we  
23 know that we are going to have bleeding like this, and we just  
24 do our best to get them through a month.

25 And trip -- at least in my experience, triple therapy with

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1 any of these drugs is a -- in a patient like Mrs. Knight who  
2 has, you know, a history of blood loss, of GI bleeding is just  
3 a -- just a problem waiting to happen, and there's not a good  
4 answer for it.

5 You -- what you give up if you don't do that is you put  
6 Mrs. Knight at a tremendous risk of having a stroke or a  
7 tremendous risk of clotting off that stent. And if you put a  
8 stent in one of those big vessels, and it suddenly closes off,  
9 that acute closure I talked about before, I think the chance  
10 that she would have survived it would be very low.

11 Q. And you were asked some questions about whether or not  
12 Mrs. Knight had ever had a GI bleed while she was on warfarin.

13 And I actually want to ask you to go back to 9005B if you  
14 would, please, in your binder. I'm going to go to page 24.

15 A. I'm there.

16 Q. Do you recognize this as a record of a visit with Dr.  
17 Gunnalaugsson, Mrs. Knight's cardiologist, in May of 2009?

18 A. I do.

19 Q. Okay. And at the bottom of that first section called  
20 History of Present Illness, you see where it says: She has a  
21 history of extensive carotid disease in the past, status post  
22 left CVA.

23 Do you see that?

24 A. I do.

25 Q. And is that just a reference to blockage in some of her

1 vessels in her body?

2 A. Correct, in her -- in the blood vessels that go to your  
3 brain.

4 Q. On the side of the neck?

5 A. Uh-huh.

6 Q. And that next sentence says: She has had bad GI bleeds in  
7 the past and has been a really tough case with regard to  
8 anticoagulation.

9 Do you see that?

10 A. I do see that.

11 Q. Okay. And is that one of the records that you were  
12 referencing when you said there was some indication that her  
13 doctors believed that she had had GI bleeds on warfarin in the  
14 past?

15 A. Correct.

16 Q. Dr. Crossley, the last topic I wanted to cover with you is  
17 the topic of what might have played a role in Mrs. Knight's  
18 passing. You were asked a series of questions about what  
19 opinions you have or don't have on that topic. Let me ask you  
20 this.

21 Based on your review of the medical records, including  
22 some of the records that we reviewed today, did you see any  
23 indication that Mrs. Knight's doctors at the time believed  
24 that her GI bleed had somehow contributed to her decline in  
25 the summer of 2013?

1 A. I -- I don't. I mean, there is no mention in the  
2 discharge summaries of that. There is no mention in the death  
3 certificate. There is no mention in the clinic visits that  
4 they felt that -- I think all of the verbiage there and all of  
5 the history there paints a picture, as I said, of progressive  
6 disastrous coronary disease.

7 Q. And is that what you meant when you said -- when you were  
8 talking about Dr. Abdelgaber's testimony and that reference to  
9 her not bouncing back, what did you mean when you said it did  
10 seem like she wasn't bouncing back? What were you referring  
11 to?

12 A. Well, in that time period she failed. I mean, she did  
13 very badly. She just -- she kept coming back to the doctor  
14 with chest pain and shortness of breath and orthopnea and lots  
15 of heart failure findings and more chest pain and then a non-Q  
16 wave myocardial infarction. And she just had this progressive  
17 downhill course that if you didn't look at the symptoms, you  
18 might think was just because of the last big thing that  
19 happened.

20 I think there were a lot of big things that happened in  
21 that interval, which were a lot of things having to do with  
22 her coronary disease and her heart failure.

23 Q. Excuse me. I didn't mean to interrupt you. I apologize.

24 Was one of the things that happened to her actually that  
25 same year that she had had a heart attack in April of 2013?



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1 A. That's correct.

2 Q. Okay. And do you recall, having had a chance to review  
3 Dr. Abdelgaber's deposition testimony, that he testified that  
4 it was just as likely that her deterioration began with her  
5 heart attack and the placement of her stents in April of 2013?

6 A. Correct.

7 Q. And in fact, did you have an opportunity to look at what  
8 Dr. Abdelgaber actually wrote in the death certificate for  
9 Mrs. Knight in September of 2013?

10 Did you see that?

11 A. Yes, I did.

12 Q. We talked about that on direct examination; is that right?

13 A. That's correct.

14 Q. Did you see anywhere in Dr. Abdelgaber's testimony where  
15 he said, I think I got that wrong or that is somehow  
16 incomplete or otherwise said that he believed her death  
17 certificate was incorrect?

18 A. I -- no, I haven't seen that.

19 Q. Okay.

20 MS. JONES: Nothing further, Your Honor.

21 THE COURT: All right. Recross?

22 RECROSS-EXAMINATION

23 BY MR. CHILDERS:

24 Q. Doctor, did you just testify that there was nothing in any  
25 of the records after Ms. Knight's GI bleed and before her

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1 death that mentioned the GI bleed?

2 A. No. I -- what I said is I don't -- I didn't see anything  
3 that attributed her waning state to the GI bleed.

4 Q. Let's look at a couple of records. Okay?

5 A. Okay.

6 Q. And I'm just going to put these on the Elmo.

7 The first one is from July 12th, 2013, right?

8 A. Right.

9 Q. That's after the bleed?

10 A. Yes.

11 Q. About month and a half after the bleed, right?

12 A. Correct.

13 Q. And in particular, it says that she had -- she was in the  
14 hospital, new onset bleeding. Diagnosis of gastritis and AV  
15 malformations. Went to rehab, discharged home on June 8th.

16 Right?

17 A. That's correct.

18 Q. And then just below that, it says: She's been weak since  
19 all of her recent admissions. She's just not bouncing back.

20 Right?

21 A. That's correct.

22 Q. Okay. Then if we look -- this is another consult report  
23 from August 23rd, 2013, right?

24 A. Yes.

25 Q. She was there for elevated troponin, right?

1 A. Elevated troponin.

2 Q. I'm sorry.

3 A. Yes.

4 Q. And that you talked about with us earlier is a cardiac  
5 marker?

6 A. That's correct.

7 Q. Can kidney failure cause your troponin to be elevated?

8 A. A little bit, not -- not -- in interpreting troponin, you  
9 have to look at the pattern of it. And so kidney failure can  
10 create an elevated consistent troponin, but it doesn't -- it  
11 doesn't cause a troponin that goes up and comes down. So that  
12 is how one has to evaluate that.

13 Q. Kidney failure can elevate your troponin, right? That's  
14 my only question. It can.

15 A. You're asking for a yes no answer to something that  
16 doesn't have a yes no answer. I just gave you the answer.

17 Kidney failure can cause the troponin to go up and stay  
18 flat and stay elevated for good. It doesn't cause it to go up  
19 and come down as it did in Ms. Knight.

20 Q. Okay. And this record was just over a week before Betty  
21 Knight passed away, right?

22 A. Correct.

23 Q. And they specifically mention in the medical history that  
24 she had a gastrointestinal bleed, correct?

25 A. Well, they mention that under past medical history.

1 Q. Right.

2 A. Not as a current issue.

3 Q. No, I understand that.

4 They put it in past medical history to let the doctor know  
5 these are the problems this patient has been having, right?

6 A. That doesn't mean that's the problem they're having today.

7 Q. I'm not asking you that.

8 A. Yeah.

9 Q. These are problems --

10 A. Yeah, they acknowledge that in the past she had a GI  
11 bleed, yes.

12 Q. Okay. You were just shown another record from Dr.  
13 Gunnalaugsson from May of 2009, right?

14 A. Yes.

15 Q. And I just want to be clear on this.

16 You know that Dr. Gunnalaugsson testified he never  
17 confirmed in any medical record that Betty had a GI bleed,  
18 right?

19 A. I -- I hear that, yes.

20 Q. Okay. But you keep showing us records of his that say she  
21 had a GI bleed even though he's told us he never confirmed it,  
22 right?

23 A. That -- yes, that is correct.

24 Q. Okay.

25 A. Now how one confirms it, there are different levels of

1 evidence of a GI bleed.

2 Q. Well, you're a cardiologist, right?

3 A. I am a cardiologist.

4 Q. He's a cardiologist, right?

5 A. Yep.

6 Q. He didn't confirm it in the records, right?

7 A. He -- he kept saying it throughout her medical record that  
8 she had, so it was his impression that she had a history of GI  
9 bleeding.

10 And the data says that she was anemic, and she got better  
11 with her anemia. So that is not anemia that gets -- you  
12 don't -- the principal other cause for anemia in her would be  
13 renal failure, and renal failure anemia won't get better after  
14 you transfuse her.

15 Q. Patients who have severe kidney failure, you expect them  
16 to be somewhat anemic, right?

17 A. I just answered that question.

18 You expect them to be anemic and to stay that way after  
19 you've transfused them. The transfusion then -- you don't  
20 come up and stay there. You come up with a transfusion, and  
21 you go right back down because you get lack of EPO, which is a  
22 hormone that creates red blood cells.

23 Again, it must be interpreted not in a single test, but in  
24 the pattern of tests over time.

25 Q. You told the jury earlier that a patient like Betty

1 Knight's kidney function fluctuates.

2 You expect that, right?

3 A. Yes.

4 Q. And that kidney function as a direct effect on whether --  
5 the severity of anemia, wouldn't it?

6 A. Not -- not to the level of fluctuation that she had.

7 Once you get to -- you know, most people don't start  
8 getting anemic until they get a little worse kidney function  
9 than she had. And once you get anemic, I've never seen  
10 anybody have intermittent anemia from renal failure.

11 Q. Well, she was diagnosed with chronic anemia, wasn't she?

12 A. She was -- she had -- it wasn't chronic. It was episodic.  
13 She got transfused, it came up, and it stayed up.

14 Q. Maybe I misread this. We just looked at this record.

15 A. Well --

16 Q. What does that say right there, No. 5?

17 A. Chronic anemia.

18 But that doesn't --

19 Q. So she had chronic anemia.

20 A. If you -- if you --

21 Q. You're not really --

22 A. It's difficult to answer your questions, but you diagnose  
23 that by looking at the blood counts over time. When you look  
24 at her blood counts over time, you can see that when she got  
25 transfused, her levels came up, and they stayed up after that.

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1 They didn't come up and come back down the way you would  
2 expect them to with chronic anemia from renal failure.

3 Q. Did the diagnosis say a past medical history of chronic  
4 anemia or not?

5 A. It certainly said that.

6 Q. Okay. We talked about the Pradaxa label that you had in  
7 front of you. I think it's Exhibit 5884.

8 A. Yes.

9 Q. And you looked at this aPTT section; you recall that?

10 A. Correct.

11 Q. Tell us where in the aPTT section of the label it tells a  
12 physician what the cutoff is.

13 A. It doesn't say one.

14 Q. Okay. That's what it says in the document that we saw  
15 that was an internal analysis from the company, though, right?

16 A. Yes.

17 Q. What does it say in the Pradaxa label, that you just  
18 looked at, what level of aPTT tells a doctor that a patient is  
19 at an increased risk of bleeding?

20 A. It doesn't -- the U.S. label doesn't recommend that  
21 approach. That is not what the -- Boehringer and the FDA  
22 negotiated for this label.

23 Q. The question is, does -- let me back that up.

24 The label doesn't tell a physician what level of aPTT  
25 means the patient might have an increased risk of bleed, does

1 it?

2 A. That's correct.

3 Q. That's --

4 A. That's correct. That is not what was put in this label.

5 Q. Okay. To this day.

6 A. Correct.

7 Q. Okay. As far as Betty being on warfarin, you agree with  
8 me that was an appropriate drug for her, right?

9 A. Sure.

10 Q. Okay. She did not have a stroke while she was on  
11 warfarin, did she?

12 A. She -- she did not. She had a disastrous embolic event  
13 when she got taken off warfarin, but she did not have a stroke  
14 while she was on warfarin.

15 And that certainly is not the standard that we use for --  
16 I mean, if you see a patient on subtherapeutic warfarin, you  
17 don't continue the subtherapeutic warfarin just because they  
18 haven't had a stroke. We try to use our medical judgment to  
19 see how well we think they're anticoagulated. And certainly,  
20 as you can tell by the medical record, it was a struggle to  
21 keep her within therapeutic range on warfarin.

22 Q. My only question was, she didn't have a stroke while she  
23 was on warfarin, correct?

24 A. That's correct.

25 Q. Okay. And you didn't see any record that confirmed that



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1 Betty Knight had a GI bleed while she was on warfarin,  
2 correct?

3 A. That's correct.

4 Q. You said you prescribe the 75-milligram dose of Pradaxa to  
5 some of your patients, right?

6 A. That's correct.

7 Q. Do you prescribe that dose to some patients who don't have  
8 severe renal impairment?

9 A. Maybe once or twice, almost never. With -- I do recall  
10 one elderly woman that had just an enormous risk of stroke,  
11 had a prior stroke and was just head-to-toe bruising on -- on  
12 150 that we put on 75.

13 Q. That would be contrary to what the FDA-approved label  
14 said?

15 A. It is. But it is part of being a doctor and having a  
16 problem in front of you that you've got to solve.

17 Q. I think you told us earlier that you actually participated  
18 in the Pradaxa clinical trials, right?

19 A. The RE-LY trial, yes, we did.

20 Q. You were a -- what kind of site did you say you were?

21 A. Site principal investigator.

22 Q. Okay.

23 A. That's our -- our site enrolled about 75 patients in it.

24 Q. And when you enroll patients in a clinical trial like  
25 that, your site gets paid by Boehringer Ingelheim, correct?

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1 A. The site gets reimbursed for the costs that it takes to do  
2 the procedure.

3 Q. They give a specific dollar amount for every patient that  
4 goes into that trial, right?

5 A. That is negotiated based on what our costs are, and that's  
6 part of the ethical agreement of doing it.

7 Q. You told us earlier you wanted Pradaxa to get approved,  
8 right?

9 A. I definitely wanted Pradaxa to get approved because it's a  
10 big step forward for patients.

11 Q. Did you participate in the Xarelto or Eliquis trials?

12 A. We did not. Vanderbilt, before I was there, I believe was  
13 in the Eliquis trial.

14 Q. You didn't participate in it?

15 A. I did not.

16 Q. You prescribe all of those drug to your patients, right?

17 A. That's correct.

18 Q. You don't prescribe all of your patients Pradaxa?

19 A. No. Huh-uh.

20 Q. You prescribe even the drugs that you didn't participate  
21 in the clinical trial?

22 A. Sure.

23 Q. Okay. I think you testified -- maybe I wrote this down  
24 wrong -- that you can't rule out that Betty would have had a  
25 bleed or the same bleed or something along those lines in May

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1 of 2013 if she had been on warfarin, right?

2 A. That's correct.

3 Q. Can't rule out means it's possible that would have  
4 happened, right?

5 A. Sure.

6 Q. Okay. You agree with me that a patient on Pradaxa is more  
7 likely, 50 percent more likely to have a bleed, a GI bleed  
8 than a patient who is on warfarin?

9 A. Yes, they are. And they're much more likely not to have a  
10 stroke.

11 Q. So I understand you can't rule out the possibility that  
12 she would have had a bleed in May of 2013 if she had been on  
13 warfarin.

14 But you agree with me that any patient is more likely to  
15 have a GI bleed if they're taking Pradaxa than if they're  
16 taking warfarin?

17 A. That's correct. And they are much more likely to have a  
18 stroke if they're on warfarin.

19 Q. And Betty didn't have a stroke on warfarin, right?

20 A. She did not have a stroke on warfarin.

21 MR. CHILDERS: That's all the questions I have, Your  
22 Honor.

23 THE COURT: All right. Redirect?

24 MS. JONES: I'm all done, Your Honor. Thank you.

25 THE COURT: She said no. All right.

1 Doctor, you're excused.

2 THE WITNESS: Thank you.

3 THE COURT: All right. For the defense?

4 MS. JONES: Your Honor, could we just have a brief  
5 moment with you at the bench?

6 THE COURT: Certainly.

7 Well, why don't we go ahead and take about a  
8 five-minute recess. You may retire to the jury room.

9 (Jury not present.)

10 MR. LEWIS: I want to move in that 9009 summary.  
11 They've had that document for two days now. I've done what  
12 the rule said that I needed to do, which is provide them the  
13 document. So we want to move it in.

14 MR. CHILDERS: Are we on the record, Your Honor?

15 THE COURT: Yes.

16 MR. CHILDERS: I will say this. They didn't do what  
17 the rule said they are supposed to do. They didn't provide it  
18 to us ahead of trial.

19 Beyond that, it had mistakes in it when we did get it.  
20 The mistakes were told to them. They have -- we told them  
21 last Wednesday what the mistakes were, and then we didn't get  
22 a response until Sunday night after 10:30 when we were about  
23 to come in to trial to deal with two more witnesses.

24 I am sorry we haven't had a chance to go through it  
25 entirely, but that's not our fault, Your Honor. We tried to

1 be as efficient as we could in getting that done. So we still  
2 object to it.

3 MR. LEWIS: They had -- let's just make sure the  
4 record is clear on this. They had the documents that support  
5 the summary for over a year.

6 THE COURT: And those are not -- there's no objection  
7 to those --

8 MR. CHILDERS: No, sir.

9 THE COURT: -- underlying documents.

10 MR. CHILDERS: No, sir.

11 MR. LEWIS: No.

12 And we told them precisely what documents were going  
13 to support the summary, called those out and provided those to  
14 plaintiffs' counsel. And they said we want additions to that,  
15 we want additional INR readings on the summary. We made those  
16 corrections, supplied the summary on Sunday night.

17 If they have an objection to the summary, let's hear  
18 what that is right now, and we'll make the correction.

19 THE COURT: Well, so to be clear, first, the state of  
20 the original exhibit is that the chart with the underlying  
21 documents was found to be incomplete in some sense by  
22 plaintiffs. You have since amended the chart to reflect what  
23 they have raised with you.

24 MR. LEWIS: Yes.

25 THE COURT: All right. So now you have an amended

1 chart with the records attached.

2 But, Mr. Childers, you're saying that you all found  
3 more than just additions, actually found errors in the chart?

4 MR. CHILDERS: In the original chart, we did, Your  
5 Honor. We found places where there were more -- that the same  
6 test was listed twice on the chart. We found places where the  
7 INR -- it was listed as an INR when it was actually a PT  
8 reading. Things that are not just you forgot to include  
9 something, it's an actual mistake that is in the chart itself.

10 In addition to being missing items -- and I understand  
11 the statute to say you've got to be complete and accurate, not  
12 just partial and accurate when you do something like this.

13 MS. JONES: And, Your Honor, I don't think we would  
14 say that didn't -- you know, that there weren't things that we  
15 needed to fix. We tried to fix them. We provided an update.  
16 It was Sunday night, we acknowledge that.

17 Now what we're hearing is not an actual substantive  
18 objection, but just they have just not gotten around to  
19 looking at, and so that means we can't get it into evidence,  
20 which doesn't seem quite fair given where we are on this.  
21 Particularly since we know the records are in, this isn't a  
22 hotly disputed issue. We just had to fix a chart.

23 THE COURT: At what point did you first provide  
24 plaintiffs a chart?

25 MR. LEWIS: It would have been prior to Dr. Ashhab's

1 cross-examination.

2 THE COURT: During trial?

3 MR. LEWIS: During trial.

4 THE COURT: Well, then I'm afraid I'm going to have to  
5 sustain the objection.

6 The purpose of the rule is to allow voluminous records  
7 to be summarized in a chart to make it easy for the jury to  
8 use and the parties to use. It's contemplated that to comply  
9 with that rule, the proponent of the evidence needs to be able  
10 to assure the Court, the jury and the opposing parties that  
11 the chart is complete and accurate. Typically with something  
12 like this where there are literally hundreds of pages of  
13 documents, that should be done in advance of trial.

14 The documents themselves that underlie this chart are  
15 admitted. Frankly, I'm concerned now that if I sustain  
16 admission, that I'm going to be giving the jury -- getting the  
17 jury a chart that may still have errors, and I'm simply not, I  
18 don't believe, entitled to take that risk.

19 Want to look at the rule? Go ahead.

20 MR. CHILDERS: Judge, if I could just point out, we  
21 didn't object to the demonstrative they made. It is this  
22 chart that we're having a problem with.

23 MR. LEWIS: So, Your Honor, Rule 1006 does not require  
24 that the documents be provided before trial. It says the  
25 proponent must make the originals or duplicates available for

1 examination or copying or both by the other parties at a  
2 reasonable time and place. It's been done a whole week ago.  
3 And the Court may order the proponent to produce them in  
4 court, which we've done.

5 So the rule is in place to do exactly what was done  
6 here. You show the records to the other side, they suggest  
7 that it isn't complete and accurate, the corrections are made,  
8 and then it's allowed go back.

9 THE COURT: The problem here is the number of  
10 documents and the lateness of providing the chart.

11 What do you intend to use this chart for if I admit  
12 the record?

13 MR. LEWIS: It's to support the -- the document  
14 supports the INR readings that have been shown on the  
15 demonstrative that is not going back with the jury. They've  
16 seen a demonstrative with fluctuating INR values, and it's  
17 simply a summary so that the jury can find those INR readings  
18 easily.

19 THE COURT: Well, do you intend in your argument to  
20 make reference to specific INR readings or reports and refer  
21 to either the chart or the underlying documents during your  
22 closing?

23 MR. LEWIS: Ms. Jones is doing the closing, so I'll  
24 defer to her.

25 MS. JONES: Well, I certainly intend to talk about her



1     INR variability. I was not planning on waving the chart  
2     around necessarily during closing.

3             THE COURT: Well, here's my concern.

4             I appreciate that the lengths to which both sides have  
5     gone to try to provide copies of everything, disclose all  
6     exhibits in advance of trial, you folks have complied with the  
7     spirit and letter of disclosure as best I can tell.

8             The problem here is that this is -- these are  
9     voluminous records. This chart wasn't provided in advance of  
10    trial. I appreciate that they've had it for several days, but  
11    in that several days, they have found what they report were  
12    omissions and/or errors. You've said that those have been  
13    corrected. I certainly assume that is the case. I don't  
14    question you at all.

15            The problem now is that if I give -- if we admit this  
16    chart, and the jury goes in and tries to use this chart, I  
17    don't know what they're going to be referring to. I don't  
18    know which entry on the chart they're going to look at.  
19    That's why I asked if you knew how you were going to use it.

20            MR. LEWIS: Right.

21            THE COURT: The problem is if they start going through  
22    a chart, and the INR or aPTT readings at various points in  
23    time become a material issue in their deliberation, I'm  
24    concerned that they're going to have to try to figure out  
25    where that chart -- where that record is underneath it and

1 compare it.

2 MR. LEWIS: That's correct.

3 So, Your Honor, what I did during the examination of  
4 Dr. Shami is to admit, if you recall, the back-up documents.  
5 Frankly the voluminous records are right there.

6 THE COURT: Right.

7 MR. LEWIS: So that's one exhibit, and we'll just cite  
8 to that.

9 And if we have to cite something in the closing,  
10 we'll --

11 THE COURT: And I think you're fine to take any pages  
12 from that exhibit and use them in your closing.

13 MR. LEWIS: Okay.

14 THE COURT: -- however you so desire.

15 MR. LEWIS: Okay.

16 THE COURT: I think that's what you're going to have  
17 to do under the circumstances.

18 MR. LEWIS: Okay.

19 THE COURT: All right. So does the plaintiff intend  
20 to offer rebuttal evidence?

21 Well, first, I assume you're going to rest now subject  
22 to maybe the exhibits?

23 MS. JONES: Yes, Your Honor. I've been informed by  
24 Mr. Hailey, who is back here, that we still need to get in the  
25 script records or whatever we're doing for purposes of the

1 video deposition plays to make sure that they are in the  
2 record.

3 And I'm not sure that we have to do that before we  
4 officially rest in front of the jury, but that's another  
5 outside --

6 THE COURT: Well, subject then to completing the  
7 request to introduce exhibits that were used in examination of  
8 witnesses, the defendant is resting.

9 MS. JONES: Subject to just making sure everything  
10 gets in, yes.

11 THE COURT: Right.

12 And then do the plaintiffs intend to offer rebuttal  
13 evidence?

14 MR. CHILDERS: We don't, Your Honor.

15 THE COURT: All right. I assume, then, the parties  
16 agree that the next step is going to be dealing with the  
17 pending motions, instructions, and then we'll be done. So my  
18 inclination is to bring the jury out here and send them home  
19 until 9:30 tomorrow, and for us to stick around and work  
20 through the remaining steps necessary to be able to give this  
21 case to them with instructions and closings when they get back  
22 here in the morning.

23 Okay?

24 MR. CHILDERS: Thank you, Judge.

25 MR. MOSKOW: Thank you, Your Honor.

1 THE COURT: All right. So let's bring the jury back  
2 in.

3 THE COURT SECURITY OFFICER: Okay.

4 THE COURT: I'm going to let each side declare the end  
5 of their evidence on the record, understanding that the  
6 defendant is reserving the right as to any exhibits that have  
7 not yet been moved, and I would assume the same with regard to  
8 the plaintiffs.

9 MR. MOSKOW: Yes, Your Honor.

10 MS. JONES: Yes, Your Honor.

11 (Jury present.)

12 THE COURT: All right. Ladies and Gentlemen, thank  
13 you for your patience.

14 All right. Ms. Jones?

15 MS. JONES: Thank you, Your Honor. The defense rests.

16 THE COURT: All right. Ladies and Gentlemen, the  
17 defense rests its case. That means they have finished  
18 presenting their case in chief.

19 As I told you at the beginning, plaintiffs have the  
20 right to offer rebuttal evidence.

21 Do the plaintiffs want to offer rebuttal evidence?

22 MR. CHILDERS: No, Your Honor.

23 THE COURT: All right. So the plaintiffs rest as  
24 well.

25 So you've heard all of the evidence you will hear in

1 this case. But given the hour, there is simply no way we're  
2 going to get through instructions and closing arguments to be  
3 able to hand this case to you to begin your deliberations  
4 until tomorrow. So we are going to recess until 9:30  
5 tomorrow.

6 When you come back in the morning at 9:30, barring  
7 some unforeseen circumstance, I'm prepared to read the final  
8 instructions, which will probably take about half an hour, and  
9 then we're going to do closing arguments. And at that point,  
10 you'll then be given the case to begin your deliberations.  
11 And when that occurs, you will be in charge of the timing of  
12 everything. The rest of us will await your direction about  
13 taking breaks, how long you stay, all of those things.

14 So we're going to recess until 9:00 a.m. tomorrow --  
15 or sorry -- 9:30 a.m. tomorrow. As I've indicated, I have  
16 every reason to believe we're going to send this case to you,  
17 and you will get it in time to be deliberating for a  
18 substantial period tomorrow. However, it is certainly  
19 possible, especially with a case like this, that you may  
20 choose to go into the evening a bit. It will be up to you.

21 I say this now because I think all of you should  
22 consider what, if anything, you have to do in order to be  
23 prepared to stay longer if the jury together agrees to stay  
24 past 5:00 or an hour like that. So it will be your choice. I  
25 hope that you all will be agreeable to whether you want to end

1 right at 5:00 or you want to go past that and, if so, for how  
2 long. So be prepared individually to do whatever as a group  
3 you decide to do.

4 Also, remember, now that you've heard the evidence,  
5 there is still an extremely important part of this trial that  
6 you haven't heard. You haven't heard this Court's  
7 instructions about the law that you're to apply once you  
8 decide what the fact are. And you haven't heard the closing  
9 arguments of these fine lawyers. Obviously they have worked  
10 hard on both sides to prepare this case. I'm going to give  
11 them an adequate amount of time tomorrow to make their closing  
12 statements. I want you to come back with the frame of mind to  
13 be open to what the lawyers argue, and then and only then to  
14 try to decide what you think the verdict should be.

15 Remember to leave any legal pads or anything like that  
16 you have taken notes on here. With that, we will see you back  
17 here at 9:30 a.m. tomorrow.

18 I would direct everyone else to remain in the  
19 courtroom until all of the jurors have departed.

20 (Jury not present.)

21 THE COURT: You may be seated.

22 All right. Here's what we're going to do next. We're  
23 going to take half an hour recess. When we come back, I  
24 intend to hear brief argument on the preemption motion. I  
25 intend to hear brief argument on the other directed verdict

1 motion. At this point, I think I'm inclined and prepared to  
2 rule on each of them and then immediately get into the final  
3 instructions and try to work through those and a verdict form  
4 before we conclude for the day.

5 All right. See you back here in about half an hour.

6 THE COURT SECURITY OFFICER: All rise. This court  
7 stands in recess.

8 (Recess taken at 4:04 p.m.)  
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1 THE COURT: All right. Are we ready to proceed?

2 MR. MOSKOW: Yes, Your Honor.

3 MR. LEWIS: Yes, Your Honor.

4 THE COURT: All right. Let's start first with our  
5 favorite subject, pre-emption. I'd like -- do you want to  
6 do the exhibits first? That's fine with me if you want to  
7 do that.

8 MS. JONES: We just had one exhibit that I needed  
9 to make sure we moved in, Exhibit 9003-C which is just a  
10 shorter version of a medical record.

11 MR. MOSKOW: No objection, Your Honor.

12 THE COURT: All right. It's admitted.

13 MS. JONES: 9003-C. Thank you, Your Honor.

14 (Exhibit Number 9003-C admitted into evidence.)

15 THE COURT: Well, now my clerk's asking me -- so  
16 what we had tendered we understood were 9003, which was a  
17 voluminous exhibit. And then what I understood to be  
18 excerpts 9003-A and 9003-B. B is what we just admitted.  
19 So -- C is what we admitted.

20 MS. JONES: Yes, Your Honor.

21 THE COURT: So is 9003, the voluminous exhibit, is  
22 it -- your folks are saying, yes, it was admitted. Is  
23 that --

24 THE CLERK: That's true -- but I'm not sure that  
25 they --



1 THE COURT: Did you mean to? I mean, is that what  
2 you want in?

3 MS. JONES: Hold on just a second.

4 (Pause)

5 MS. JONES: I'm told we just need the excerpts, so  
6 9003-A, B, and C, not 9003.

7 THE COURT: Is that acceptable to the plaintiffs?

8 MR. MOSKOW: That's fine, Your Honor.

9 THE COURT: All right. So 9003 will not be  
10 admitted. In its place we'll have 9003-A, B and C which are  
11 excerpts of that larger exhibit. Okay?

12 And then do you have something with respect to exhibits  
13 or --

14 MR. MOSKOW: I know that the parties are just  
15 working through the final transmittal of the video  
16 depositions. I don't believe that's been finalized yet. I  
17 understand we're prepared to tender a thumb drive to the  
18 Court that has all of that information.

19 THE COURT: All right. Then --

20 MR. MOSKOW: Maybe it could be marked as a court  
21 exhibit, Your Honor? Is that appropriate?

22 THE COURT: All right. The courtroom deputy says  
23 she would like the opportunity with the court reporter's  
24 assistance and representatives from the parties to review  
25 the video depositions, make sure that we're all satisfied

1 with what's in, what's out, and then make certain that  
2 there's a thumb drive that reflects that which will then be  
3 admitted. So we're okay to do that.

4 MR. MOSKOW: We'll work with Ms. Justice to make  
5 sure that that happens, Your Honor.

6 THE COURT: All right. That's great. Anything  
7 else then in regard to exhibits or other matters?

8 MR. LEWIS: Other matters perhaps, Your Honor.

9 THE COURT: Yes.

10 MR. LEWIS: I feel like we should make a formal  
11 motion at the close now of all of the evidence --

12 THE COURT: Okay.

13 MR. LEWIS: -- before we get into maybe more  
14 general arguments that I think Your Honor has contemplated.  
15 Is that okay for me to do?

16 THE COURT: Yes.

17 MR. LEWIS: At this time, Your Honor, now that the  
18 evidence has closed, defendant moves for judgment as a  
19 matter of law on all of the claims that are in the case.

20 We renew the grounds for, for this motion that we made  
21 at the motion for judgment as a matter of law at the close  
22 of plaintiffs' case. But I did want to add a couple of  
23 additional grounds, Your Honor, if I may, or at least  
24 clarify what our motion entails. I'm not sure these are  
25 additions.

1 THE COURT: Okay.

2 MR. LEWIS: Before moving for all of the claims  
3 that either are in the complaint or have been made here at  
4 trial through cross-examination of the witnesses or by any  
5 kind of evidence as it came in at trial on federal  
6 pre-emption.

7 So that includes the -- any direct warnings to patients  
8 such as the Medication Guide, also any warnings to  
9 physicians such as the physician label, but also on any  
10 claims related to an absence of providing information to  
11 patients or physicians. All of those claims, in our view,  
12 are pre-empted by federal law as they've been presented here  
13 in this trial. So that's one ground.

14 To the extent any claims survive pre-emption, Your  
15 Honor, we would move for judgment as a matter of law on  
16 those remaining claims because they fail for either lack of  
17 duty under West Virginia law or lack of evidence, either  
18 expert testimony suggesting that the manufacturer fell below  
19 the standard of care or otherwise with an inadequate warning  
20 or that there's evidence to support a deficiency that's  
21 asserted by the plaintiffs.

22 And then the rest of the claims in the case, Your  
23 Honor, are addressed by our original motion for judgment as  
24 a matter of law at the close of the plaintiffs' case.

25 THE COURT: All right. Do you want to respond?

1 MR. MOSKOW: Yes, Your Honor. Thank you.

2 First, with regard to the claim that -- or the, the  
3 motion that all claims based on federal pre-emption are  
4 barred, as the Court is well aware, pre-emption is an  
5 affirmative defense. The defendant bears the burden.

6 They have put no evidence in the record at trial as to  
7 their attempts to secure the warnings that plaintiff says  
8 are required. Their failure to meet that burden is fatal to  
9 their defense at this point.

10 So the, the lack of evidence in and of itself bars the  
11 claim. And that's something that I will go into more detail  
12 when we discuss later.

13 THE COURT: All right.

14 MR. MOSKOW: With regard to there being no duty  
15 under West Virginia law, I think we very clearly established  
16 that they had a duty to warn both Ms. Knight and her  
17 physicians under, under West Virginia law.

18 The duty goes directly to Ms. Knight under, under  
19 *Johnson*. They have a duty to make sure that the label is  
20 accurate at all times to the physician. And the law is  
21 clear that the defendants do not meet their burden on either  
22 motion.

23 THE COURT: All right. Thank you.

24 I intend to rule on this as we get into the other  
25 motions.

1           So let's go back, then, to the defendant's motion  
2           challenging the sufficiency of the plaintiffs' evidence on  
3           pre-emption at the close of plaintiffs' case.

4           MR. LEWIS: Okay, Your Honor. Well, we've -- do  
5           you want me to open or do I --

6           THE COURT: Yes. Go ahead and then I'm going to  
7           ask a couple of questions.

8           MR. LEWIS: Sure.

9           Your Honor, the plaintiffs' claims here -- and I have  
10          to be honest and I want to be fair -- have vacillated first  
11          starting with a straight out attack on the Medication Guide  
12          and then sort of morphing into a more general should have  
13          supplied through some other vehicle additional information  
14          to patients directly, and then still morphed into a  
15          criticism of what was provided to physicians or perhaps even  
16          that a "dear doctor" label or "dear doctor" letter should  
17          have been sent around. Maybe TV ads should have been taken  
18          out.

19          So, I mean, we've really gotten a scattershot theory  
20          here under a failure to warn and some of the other claims  
21          that are tied to a failure to warn.

22          But at the end of the day, it all comes down to  
23          whatever these claims are need to be run first through a  
24          pre-emption analysis, and then secondly through an analysis  
25          of whether there's a duty under West Virginia law and

1     whether the evidence supports it.

2           So focusing on pre-emption, we start with the  
3     proposition that we have an FDA approved label that cannot  
4     be changed at all, and we're talking about the Medication  
5     Guide or the physician label or any communication from  
6     manufacturer to anyone is, is labeling that needs to be  
7     approved by the FDA.

8           And, so, let's start with labeling on the Medication  
9     Guide.

10          The Medication Guide is the one patient labeling that  
11     was permitted by the FDA. And we cite to the 21, C.F.R.,  
12     208 that outlines -- the FDA doesn't always require a  
13     Medication Guide. There are a lot of medicines that are  
14     supplied without a Medication Guide.

15          But in that C.F.R. section there are circumstances  
16     where the FDA says these circumstances are present and we're  
17     going to regulate what you can say to patients and we're  
18     going to do it through this thing called a Medication Guide.

19          And then there are rules surrounding what needs to be  
20     in that Medication Guide and it needs to be approved by the  
21     FDA.

22          So we get to the pre-emption analysis step one on the  
23     Medication Guide. We have an FDA approved communication and  
24     that cannot be changed without FDA approval. There are no  
25     exceptions to that. And we've cited the regulation to the

1 Court in our papers earlier.

2 And that includes any communication to patients.  
3 There's no circumventing that rule. That rule is,  
4 "Manufacturer, this is how you're going to communicate to  
5 patients." And there would be no ability for the  
6 manufacturer to go around that regulation and say something  
7 different or additional or contradictory to what's in the  
8 Medication Guide.

9 That's just what the regulation is and we just happen  
10 to have a circumstance here where we've got a  
11 direct-to-patient jurisdiction and we have a Medication  
12 Guide that was approved by the FDA and can't be changed.  
13 And because of that, any claims related to direct-to-patient  
14 communications are pre-empted by federal law.

15 There are no exceptions, but when we get to physician  
16 labels, there are some exceptions to an FDA approved label.  
17 And that's when we get to step two in the pre-emption  
18 process.

19 Step one is you have an FDA approved label that cannot  
20 be changed absent something allowing you to change it. And  
21 there's the Changes Being Effected section of the  
22 regulations that do allow manufacturers to change the  
23 physician labels under certain circumstances. But those  
24 circumstances first have to be present in order to have the  
25 ability to change the label.

1           And I've heard plaintiffs' counsel make this statement  
2           and it's an incorrect statement of law to suggest that the  
3           defendant has the burden to show that the FDA would have  
4           rejected the change. That's not what the law is.

5           The *Utts* case which we've cited in our papers is a case  
6           against the other -- the Eliquis which is the other  
7           anticoagulant medication, brand name anticoagulant  
8           medication. And that case lays out the analysis.

9           You start first with you've got a physician label that  
10          cannot be changed absent the Changes Being Effected section.  
11          And in order for the plaintiff to be able to pursue a theory  
12          against the label, against the physician label, the  
13          plaintiff has the burden to come forward with evidence that  
14          there's newly acquired information or analysis to support a  
15          change under that provision. There has to be newly acquired  
16          information.

17          If there's an absence of newly acquired information  
18          that supports the change, not just any information, that  
19          supports the change that the plaintiffs are saying needed to  
20          be changed, then they can pursue a claim.

21          If there isn't newly acquired information, then there  
22          is no ability for the manufacturer to change.

23                 THE COURT: We know in this case that the label  
24          did change over the course of a number -- three or four  
25          changes before Betty died, maybe even some after.



1 Under what authority were those changes allowed?

2 MR. LEWIS: It depends on what change we're  
3 talking about, Your Honor.

4 THE COURT: Well, let's talk about the ones the  
5 plaintiff has pointed out specifically. And you're going to  
6 be much more conversant with the date of the label.

7 But my recollection is as compared to the launch label,  
8 the label was modified to provide that if a patient is on  
9 P-gp inhibitors and has severe renal problems, Pradaxa is  
10 not recommended.

11 So let's start with that. That was a change made after  
12 the launch before Betty's last prescription and before her  
13 death. How was that change effected?

14 MR. LEWIS: Sure. That was a CBE change that was  
15 made in November of 2011, one month after Mrs. Knight's  
16 first prescription.

17 THE COURT: I note there was also the change from  
18 the launch label in the -- I have down here the March, 2011,  
19 change. It was Exhibit 86, March, '11 label where language  
20 was inserted specifically saying -- and I have it at 12.3 of  
21 the label -- that patients with severe renal problems were  
22 not studied as part of the RE-LY study and some modeling was  
23 used instead to determine dosage.

24 How was that change effected?

25 MR. LEWIS: That was the Changes Being Effected

1 section. But that really wasn't, that wasn't what was put  
2 in the label.

3 The label was changed to include an analysis that --  
4 regarding severely renally impaired patients and the various  
5 risk factors of bleeding associated. And there's like an  
6 asterisk or a footnote under there, under that table which  
7 is Table 3 under I believe 12.2.

8 THE COURT: Well, I mean, how is that somehow not  
9 a change in the label? This is all -- the label is this  
10 whole document it seems to me. It's not just one or two  
11 pages. It's -- the label has the full prescribing  
12 information as part of it.

13 So what do you mean when you say it's not -- that  
14 wasn't really a change in the label?

15 MR. LEWIS: I didn't say it wasn't a change in the  
16 label. It wasn't designed to disclose what the complaining  
17 fact is that the plaintiff -- the fact that the plaintiffs  
18 are complaining about.

19 The, the plaintiffs have complained that the Medication  
20 Guide didn't contain a warning that this wasn't tested on  
21 folks who are severely renally impaired or the 75-milligram  
22 dose wasn't, wasn't tested.

23 THE COURT: Okay. I think they've also made the  
24 same complaint about the label.

25 MR. LEWIS: Well, the original label describes

1 what was tested. The original label describes that this was  
2 tested on -- there was a clinical trial --

3 THE COURT: Okay.

4 MR. LEWIS: -- and it was on 150-milligram and  
5 110-milligram doses.

6 THE COURT: In any event --

7 MR. LEWIS: There's no question that that's what  
8 was there.

9 THE COURT: Sure. In any event, come 2011 there  
10 was a change in what looks to me to be part of the label.

11 MR. LEWIS: There is a change.

12 THE COURT: Okay.

13 MR. LEWIS: And it includes the pharmacokinetic  
14 analysis that had been done previously on severely, severe  
15 renal impairment patient population.

16 THE COURT: Okay.

17 MR. LEWIS: That analysis was put into the label  
18 and I think it was the last section of that Table 3 I  
19 believe.

20 THE COURT: Right.

21 MR. LEWIS: And then there was a footnote that was  
22 put in to, to indicate that it wasn't tested on 75. But  
23 that's not the complaint that they're making.

24 The complaint that the plaintiffs are making is that we  
25 didn't originally disclose that this wasn't tested on

1 severely renal impairment.

2 THE COURT: It's not just that, though.

3 MR. LEWIS: That's what they're, that's --

4 THE COURT: That's when it starts, but that's not  
5 when it ends.

6 What they're claiming is that the RE-LY study didn't  
7 include severely impaired renal patients. And although that  
8 was in the study, there wasn't information in the Medication  
9 Guide or the label to either a doctor or the patient to  
10 point out that that was the case.

11 I mean, clearly between the launch label and the 2011  
12 label, your company added language in the label to say that,  
13 to say, yeah, -- not to say -- to say the study did not  
14 include people with severe renal impairment. We used  
15 modeling instead.

16 MR. LEWIS: But the, the modeling data was the  
17 update. It was already disclosed -- two things.

18 THE COURT: Yeah.

19 MR. LEWIS: One, it was already disclosed in the  
20 physician label. We can't change the Medication Guide  
21 either way.

22 THE COURT: Right.

23 MR. LEWIS: But it was already disclosed in the  
24 physician label, the patient population that was tested in  
25 the clinical trial, 150 and 110. There's no question that

1 any physician reading that knows that the clinical trial  
2 included 150 and 110 and no one else. That's in the label.  
3 That's in the physician label.

4 Their complaint has always been -- their complaint and  
5 the way they've tried this case, Your Honor, has always been  
6 that it's not contained in the Medication Guide.

7 But even if their complaint is now that it's about the  
8 physician label and that not being disclosed, we still have  
9 to apply the pre-emption analysis.

10 And the pre-emption analysis starts with you can't  
11 change it unless there's an exception. And then the  
12 plaintiff has to show newly acquired, newly acquired  
13 information and analysis that was done to support the  
14 change.

15 And just because we later changed it without FDA  
16 objection under the Changes Being Effected section doesn't  
17 mean we had newly acquired information that would have  
18 supported a change and that we had to change it and that it  
19 was deficient because of that.

20 Because, remember, we're also -- the step back is this  
21 is a question about whether they're -- under West Virginia  
22 law they're trying to make us do something that we can't do  
23 because we'll violate federal regulations. That's the  
24 ultimate inquiry.

25 So if they win their tort claim, is that going to make

1 us do something that we really can't do to comply with FDA  
2 regs? That's the ultimate question here.

3 And, so, the only way that we could -- that their claim  
4 could survive is to be able to show under the law that we  
5 had newly acquired information --

6 THE COURT: Or analysis.

7 MR. LEWIS: -- or analysis that we should have  
8 changed it earlier. That's, that's the issue.

9 The fact that we ultimately made the change without FDA  
10 objection doesn't prove that we had newly acquired  
11 information, we should have changed it earlier.

12 THE COURT: With respect to their arguments about  
13 monitoring, the plaintiffs have adduced evidence that after  
14 Pradaxa was on the market, there were, first, reports in the  
15 literature but also exchanges between BI employees or agents  
16 about the advisability of either doing some type of testing  
17 at the beginning of a prescription or in having some type of  
18 testing and monitoring thereafter, especially with patients  
19 who have severe renal problems.

20 We know the label was never changed to implement that  
21 suggestion. But why wouldn't that be newly acquired  
22 analysis that if believed by the jury would have permitted  
23 Pradaxa, BI to change the label?

24 MR. LEWIS: Sure. So for that particular claim --  
25 and I'm going to restate it probably better than the

1 plaintiffs have in this case just because they've jumped  
2 around a bit. But if the claim in the case is you should  
3 have warned physicians to -- that there are levels of  
4 monitoring that you could then adjust dosages and  
5 modifications to see if they've had too much Pradaxa, it's a  
6 closer call. And I'm going to fully acknowledge that. That  
7 is a closer call.

8 And I've got to be honest with you, Your Honor. That's  
9 what we thought this case was going to be about because  
10 that's how they've tried every other case. And that's why  
11 you didn't get a summary judgment motion on that point  
12 because it's a closer call on pre-emption.

13 We definitely have an approved FDA label that didn't  
14 require monitoring. We have some new analysis that was  
15 done. There's no question about it. And I think there's  
16 probably a fact issue on whether there's newly acquired  
17 information or newly acquired analysis that warranted a  
18 change.

19 And we don't quite have the, the slam dunk clear  
20 evidence that the FDA would have rejected the change. We  
21 don't have the, okay, we want to do this and a flat out  
22 rejection of that. But that's only for that failure to warn  
23 claim, that piece of the failure to warn claim. That  
24 doesn't mean they get to make all of these other allegations  
25 about deficiencies in the warning.

1 But on the failure to give monitoring information, I  
2 think it's a closer call. I could craft an argument that  
3 that's pre-empted based on some of the data. But some of  
4 that data isn't into the trial evidence here. And, so, I  
5 think it's a close call for the Court --

6 THE COURT: Okay.

7 MR. LEWIS: -- on that particular issue.

8 That's why when I argued the DV before I was very  
9 careful to carve that piece out and say, you know, that's a  
10 close call. I think arguments go -- but on these other  
11 claims, Your Honor, they're clearly out.

12 The only claim that they could arguably pursue is the  
13 monitoring claim. But that's not what they've pursued  
14 throughout this trial. Frankly, the monitoring claim fails  
15 for other reasons not about pre-emption. I don't know if  
16 you want to talk about that now or later.

17 THE COURT: No. Let's try to stick with this one  
18 for now.

19 MR. LEWIS: Yeah. It's complicated enough.

20 THE COURT: All right.

21 MR. LEWIS: That's -- I mean, so when, when we're  
22 looking at all of the challenges to the label, the, this  
23 same analysis, and *Utts* does it, the *Dolin* case, the same  
24 analysis has to be done for each of the challenges.

25 And I want to address -- because I know what's going to



1 be said. I've heard it said before. They can't end around  
2 pre-emption by saying, "Well, I'm not really challenging the  
3 Medication Guide. I'm just going to say to the jury what's  
4 in and not in that Medication Guide."

5 That's the same thing. That's like if the Court were  
6 to grant directed verdict on an express warranty claim that  
7 involved a specific paper and the Court found, you know  
8 what, that doesn't meet the test for an express warranty.  
9 Okay. That claim's out.

10 They can't get up in front of the jury and say, "Look  
11 at this. This was a warranty that they gave and look at  
12 what's missing." They can't do that. Once that claim is  
13 out, it's out.

14 THE COURT: All right.

15 MR. LEWIS: So that would be the other argument  
16 that I'd like to make.

17 THE COURT: Here's the last thing that I'll give  
18 you a chance to respond to.

19 So you characterize this as plaintiffs' failure to show  
20 that pre-emption doesn't bar these various claims. Of  
21 course, that's not the way the issue is framed in the  
22 leading authorities. It's not the way the Supreme Court  
23 frames it in *Wyeth*. It's not the way the appellate courts  
24 have framed it.

25 They've always framed it, and plaintiff made this

1 argument, articulated this, I guess it was last night, that  
2 the burden is on the defendant to establish what is  
3 characterized as a very difficult burden to establish  
4 conflict pre-emption, impossibility that the FDA -- that,  
5 that you could enact these changes to the label argued as  
6 created by state tort law without the FDA's approval.

7 And, so, here what we do know is that you've  
8 acknowledged that there's one change that maybe is arguable  
9 that might have been based upon newly acquired analysis.  
10 That's the monitoring that we just discussed.

11 I think you've heard me declare that by the regulation,  
12 the CBE regulation, the Medication Guide is not subject to  
13 the tort law claims, that the plaintiff cannot pursue a  
14 claim here that's based upon an alleged defect or  
15 insufficiency in the Medication Guide itself.

16 So we're somewhere in between with respect to these  
17 others. And now we know, as you've acknowledged, that some  
18 of the changes to the label are changes that plaintiff has  
19 argued were appropriate and necessary to fully inform  
20 doctors and their patients about the limitations of the  
21 RE-LY study and the, the risks that BI knew or should have  
22 known was presented by the use of Pradaxa in these patients.

23 So it seems to me that the burden is on the defendant  
24 to establish that the labeling changes that plaintiff  
25 advocates would not have been approved by the FDA.

1 In *Dolin* they presented an extreme case that  
2 demonstrates that principle by showing how many times the  
3 FDA rejected something. In the circuit they relied upon  
4 that.

5 There's neither an expert nor other evidence here from  
6 the defense that demonstrates to me that the FDA did or  
7 would have disapproved of the labeling changes that  
8 plaintiff is arguing for.

9 MR. LEWIS: Your Honor, the case law is very clear  
10 that it's plaintiffs' burden to come forward as part of  
11 their end around pre-emption with evidence of newly acquired  
12 information supporting a change. That's got to be part of  
13 their claim.

14 The *Utts* case -- and if I may just read from it.

15 THE COURT: Go ahead.

16 MR. LEWIS: This is a 2017 case regarding Eliquis.  
17 Bristol-Myers is the defendant.

18 Post FDA approval pre-emption analysis proceeds in two  
19 stages. First, the plaintiff must show that there exists --  
20 plaintiff must show that there existed newly acquired  
21 information such that the defendants could unilaterally  
22 change the label pursuant to the regulations without FDA  
23 approval.

24 Because the starting point is I've got an FDA approved  
25 label and I can't change it. So that's the -- I've

1 established my burden.

2 Do I have an FDA approved label that I can't change?  
3 As a defendant, I've established my burden on the  
4 affirmative defense.

5 The law says, okay, you want to avoid that? You have  
6 to come forward with newly acquired evidence. And if the  
7 plaintiff can point to newly acquired evidence to support a  
8 labeling change under the regulations, then the burden  
9 shifts to the manufacturer to show by clear evidence that  
10 the FDA would not have approved.

11 So it's, defendant, you've got to show that you've got  
12 an FDA approved label and that you can't change it unless  
13 there are certain exceptions.

14 Plaintiff then has to come forward and say, okay,  
15 here's newly acquired information and they should have  
16 changed it, and that's part of my tort claim. I'm not  
17 barred by federal pre-emption because it doesn't prevent me  
18 from asserting under West Virginia law that you should have  
19 changed your label with this newly acquired information.

20 Okay. Then it's my burden back to say, wait a minute,  
21 Your Honor. That's not true. We actually tried that and  
22 the FDA said, no, you're not allowed to do it. That's the  
23 analysis. And *Dolin* goes through the same analysis.

24 And I will note that in both cases there was a lot of  
25 suggested newly acquired information. And even the Court,

1 in particular the *Utts* case, is squarely our case because  
2 they're making the very similar allegation. You didn't  
3 monitor. You didn't test it, whatnot.

4 But I will say this. There was a lot more, quote,  
5 newly acquired information suggested in those cases that  
6 wasn't sufficient. There's no newly acquired information  
7 directed at the specific claims except monitoring. That's  
8 the only one where they've submitted any newly acquired  
9 information.

10 THE COURT: Okay. Thank you.

11 For the plaintiff.

12 MR. MOSKOW: Thank you, Your Honor. I prepared a  
13 rather lengthy presentation, so I'm scaling it down --

14 THE COURT: Wonderful.

15 MR. MOSKOW: -- as we're talking. And I won't  
16 even use the AV system. I think I can do it right from  
17 here.

18 THE COURT: Okay.

19 MR. MOSKOW: Your Honor, first of all, I  
20 appreciate the Court giving us the opportunity to have a  
21 continuing argument on this matter. It's of significant  
22 importance to all of the parties, and I appreciate the  
23 Court's willingness to hear us out on it.

24 And, and I have to say, you know, to the extent that  
25 there's surprise on how this case was presented, I want to

1 make clear this is the first 75-milligram case that's been  
2 tried in the country. It's also the first case with a  
3 direct-to-consumer requirement under state law. So it's not  
4 surprising that there are differences here than there were  
5 in the prior trials.

6 And while it's unfortunate that, you know, this complex  
7 issue is raised at this time, you know, we appreciate that,  
8 you know, we can, we can deal with the issues. But that  
9 does not change the burden.

10 And as the Court identified and as *Wyeth vs. Levine*  
11 makes clear, it's a demanding defense which requires the  
12 defendant to prove by clear evidence that it was impossible  
13 for it to comply with both federal and state requirements.

14 They can't do that here. They can't do it here for a  
15 number of reasons. But at the heart of this, they have put  
16 in no evidence, made no argument, and provided no case law  
17 to identify how it would be a conflict between West Virginia  
18 law and federal law for them to comply with their obligation  
19 to fully warn West Virginia residents, including Mrs.  
20 Knight.

21 And that's because, as *Wyeth* makes clear, federal  
22 approval of a drug is the floor, not the ceiling. And they  
23 have an obligation to ensure that they craft an adequate  
24 label at the time of launch and that it remains complete,  
25 accurate, fair, and balanced at all times thereafter.

1       The defendants put in no, no argument whatsoever, no  
2 evidence, no nothing to show how they're, they're put in a  
3 position where they can't comply with both federal and state  
4 law.

5       And I cite to a sister court here in West Virginia,  
6 Your Honor. It's Senior Judge Payne in the Eastern -- I'm  
7 sorry. I meant this circuit. In the Eastern District of  
8 Virginia. And it's a slip opinion. I'm not, I'm not  
9 arguing otherwise.

10       But it makes clear that the, you know, *Wyeth* controls  
11 the pre-emption issue -- and that was an allergen case --  
12 and the CBE could be used to, you know, to increase or  
13 strengthen the warnings and that wasn't done.

14       We also cite to the *Mullens* vs. *Ethicon* case in this,  
15 in this district. And in that case, Your Honor, -- and I  
16 provided copies of both these cases to the Court and parties  
17 just now.

18       And in this case, while it is a medical device case, so  
19 the regulatory scheme is slightly different, the federal  
20 pre-emption analysis is essentially identical.

21       And what that Court said is just by saying it's  
22 difficult to comply or impossible comply is not enough; that  
23 the defendant has a burden to show exactly how that  
24 impossibility comes into play. And there's, there's none of  
25 that here.

1       As the Court mentioned just a few moments ago, to the  
2 extent that the specific issues that we're talking about,  
3 the fact that the 75-milligram dose wasn't tested in severe  
4 renal AFib patients, that change was effected by a CBE.

5       So by definition, Boehringer Ingelheim represented to  
6 the FDA that there was newly acquired information or new  
7 analysis of existing information that required them to make  
8 a label change, or at least permitted them to make a label  
9 change and they made it.

10       So by definition the -- and, and by an admission of a  
11 party opponent we have demonstrated to the Court that there  
12 was newly acquired information.

13       To the extent that it strengthened the warning that was  
14 already in the label at the time of launch, you know,  
15 that's, that's a particularly important issue that's  
16 reflected both in the majority opinion in *Wyeth*. You know,  
17 we cite to the statement at Page 573, the mere fact that the  
18 FDA approved Phenergan's label does not establish that it  
19 would have prohibited such a change.

20       And, interestingly, and I must admit in my career I  
21 haven't cited to Justice Thomas a whole lot, but here I get  
22 to cite to a concurring opinion of Justice Thomas where he  
23 said at Page 582, 583 of the *Wyeth* decision federal law does  
24 not give drug manufacturers an unconditional right to market  
25 their federally approved drug at all times with the precise



1 label initially approved by the FDA.

2 If there were really an issue here as to whether or not  
3 they had tried to make the label change and were refused to  
4 do so, we would have heard about it either in  
5 cross-examination of Dr. Plunkett or they would have brought  
6 Dr. Mann, their FDA regulatory affairs person.

7 And, frankly, Your Honor, if this matter had been  
8 raised at the summary judgment stage, I would have expected  
9 an affidavit from Dr. Mann as to why or why not the  
10 plaintiffs' claims must fail. That would have been evidence  
11 for the Court to consider.

12 In the big picture here, Judge, all this reliance on  
13 *Utts*, while very entertaining, misses the point. That was a  
14 District Court in the Southern District of New York deciding  
15 summary judgment. And it did not follow the dictates of  
16 *Wyeth*. And, in fact, many courts have already distinguished  
17 themselves from that decision. That decision is pending on  
18 appeal. And it's not controlling on this Court. What is  
19 controlling on this Court is *Wyeth*. So that's where we  
20 start.

21 Where -- I want to make clear, based on what we just  
22 heard, I thought we had articulated, and I appreciate the  
23 Court repeating it back, that we had concerns about what was  
24 in the launch label based on the RE-LY data that was  
25 available before launch and was reflected in the CCDS, the

1 Core Company Data Sheet, Exhibit 351, which was dated  
2 December of 2009 and reflected excessive dabigatran exposure  
3 and talked about the close correlation between plasma  
4 concentration and anticoagulant effect.

5 Neither of those statements appear in the label. We've  
6 seen no evidence that they were ever requested. The  
7 defendants have proffered nothing as part of their defense  
8 that those, those issues were, were proffered and rejected  
9 by the FDA.

10 So from the launch label up and to, up and through the  
11 re-analysis of the RE-LY data that was part of the Reilly  
12 paper and at various times in 2010, 2011, 2012, 2013 that  
13 paper was revised to remove the therapeutic range, to remove  
14 the idea of testing. That's -- Exhibit 3247 is the final  
15 publication of that.

16 We have Exhibit 5 which is the email between  
17 Dr. Brueckmann and Dr. Reilly where they're talking about  
18 the conclusions from the RE-LY data re-analysis where Dr.,  
19 I'm sorry, Dr. Reilly says the results are not what  
20 marketing has hoped for.

21 And Dr. Brueckmann responds, yeah, we were trying to  
22 avoid a target range but, you know, maybe when we have a  
23 competitor, this will be something that can differentiate  
24 us.

25 And, most importantly, in her reply email she says

1 maybe we can distinguish ourselves from monitoring by saying  
2 you just have to test the dose at initiation and  
3 periodically thereafter. That is exactly what Dr. Plunkett  
4 said was missing from this label.

5 So I don't think there's a close argument on the  
6 monitoring and, and the blood plasma concentration, and all  
7 of those issues as counsel suggested. I think the record is  
8 clear that there was new analysis of existing information as  
9 well as post-marketing information that supported that.

10 And as to the remaining claims, Your Honor, while I  
11 appreciate that, you know, everybody is, is, is dealing with  
12 the fact that trials are living, breathing things and things  
13 happen during trial and we pivot and you adjust.

14 And the argument, well, while we think that there is a  
15 good faith legal basis to conclude based on the changes to  
16 the physician's label and the testimony from both  
17 Ms. Kliever and Dr. Plunkett that the label is one document,  
18 it's not considered the physician's label in the Medication  
19 Guide, but it's one document, we believe that there's  
20 evidence in the record that would support the defendant  
21 making a change.

22 And, in fact, when they added the information to the  
23 physician's label part of the label, the package insert,  
24 when they added that information, they never requested to  
25 add information to the Medication Guide. So we think that

1 raises a legitimate issue as to whether the statute applies  
2 in this case.

3 We've heard the Court. We've adjusted our presentation  
4 of evidence. And our presentation of evidence is to the  
5 extent that this information is in the physician's label,  
6 then you can use the Medication Guide as a tool to identify  
7 whether or not it was communicated to the, to the plaintiff  
8 in particular.

9 And, Judge, you had asked, you know, exactly how -- the  
10 other day you had asked us exactly how there could be a  
11 communication beyond the Medication Guide, or maybe Mr.  
12 Lewis did. I don't remember.

13 In the various approval letters that *Wyeth* received  
14 after each one of, after each one of these label changes,  
15 whether it was by CBE or whether it was by prior approval  
16 supplement, they received a statement that was to the effect  
17 of the following.

18 "You may request, you may request advisory comments on  
19 proposed introductory advertising and promotional label. To  
20 do so, submit the following," and it gives a list.

21 And then it goes on. "You must submit final  
22 promotional materials and package inserts accompanied by."  
23 So they don't have to wait for FDA approval to provide  
24 promotional materials at any time if they believe that  
25 there's an important issue that needs to be done.

1 And, in fact, as part of the CBE that we've been  
2 talking about, Your Honor, -- I just want to make sure I  
3 pulled the right document for you.

4 As part of the CBE that we've been talking about,  
5 Exhibit 127, Your Honor, is not in evidence. I'm using it  
6 today for purposes of helping the Court see, you know, how  
7 things developed here.

8 But the reason I think this is particularly important  
9 is because this was part of the CBE process where Boehringer  
10 was proposing to make changes.

11 And what happened here, if you look at the November  
12 to -- it's the second page of the exhibit.

13 MR. LEWIS: I'm sorry. I'm lost with this. Is  
14 this admitted? I didn't catch --

15 THE COURT: No. He represented it's not in  
16 evidence. He's using it as an example.

17 MR. MOSKOW: For purposes of this argument.

18 MR. LEWIS: Okay.

19 MR. MOSKOW: So, Your Honor, you'll see there's a  
20 pending CBE. If we look at Page 2, there's an email from  
21 Michelle Kliever to Alison Blaus, so from Boehringer to the  
22 FDA.

23 And she says, "Please find attached our proposal for a  
24 proactive communication to be sent to healthcare  
25 professionals advising them of the important update related

1 to the amended CBE." And then attached to it is a proposed  
2 physician letter, "dear healthcare provider" letter. And  
3 she asked for approval of it from the FDA.

4 And the response at the very top of the Page 2 from  
5 Ms. Blaus to Ms. Kliever is, "The review is going to take  
6 longer. We are definitely not implying that you need to  
7 hold the communication for our comment because the law does  
8 not require that they wait for FDA approval to communicate  
9 with physicians and patients about critical safety issues  
10 that are part of a CBE process."

11 In fact, I'm not aware of any regulation that prohibits  
12 them from communicating without FDA approval on any issue of  
13 safety as long as it's consistent with the approved  
14 labeling.

15 And all of the issues in the Medication Guide are  
16 consistent with the -- that the plaintiffs have raised with  
17 regard to missing information in the Medication Guide are  
18 clearly consistent with the labeling because we've  
19 identified where they are in the package insert.

20 So, first, because they failed to meet their burden,  
21 second, because we've established both through Dr. Plunkett  
22 and Michelle Kliever that the responsibility for the label  
23 remains at all times with Boehringer and that they have  
24 failed to provide any evidence that they requested and were  
25 rejected from the matters in question, we believe we've met

1 our burden and the defendant has not.

2 THE COURT: All right. Thank you.

3 Do you want like two minutes?

4 MR. LEWIS: Two minutes. Can I just --

5 THE COURT: Sure.

6 MR. LEWIS: I just want to show the Court a couple  
7 of decisions. I know Your Honor has probably read more  
8 pre-emption law during a product liability trial than you  
9 ever want to.

10 This is from the *Dolin* case. This is *Dolin* at -- this  
11 is the Seventh Circuit. So they had this trial. The  
12 defendant lost, took it up on appeal, and said based on the  
13 trial evidence, we think the Court should have pre-empted  
14 these claims or found that these claims were pre-empted.

15 And the Court is requiring the plaintiff to come  
16 forward and say, okay, what's your newly acquired  
17 information? And, again, we've talked about this data  
18 analysis. It could be old data, new analysis. That's fine.

19 Plaintiff proposes -- this is plaintiffs' burden.  
20 Plaintiff proposes two ways that we could pursue our tort  
21 claims and they had to present specific things to the Court  
22 about, okay, how am I going to avoid pre-emption? Here are  
23 the ways that I'm going to avoid pre-emption.

24 GSK withheld data to the FDA or some of the data  
25 showed -- it was about suicide risk in this particular

1 medicine.

2 They say the argument fails because the undisputed  
3 evidence shows that the FDA was aware of the nature of the  
4 data received from GSK.

5 When we look at the, many of the claims that are being  
6 made by the plaintiffs here, 75-milligram dose, severe renal  
7 impairment, these are things that the FDA indisputably knew  
8 at the time that it approved the label. And the Court isn't  
9 saying, well, you could have done -- it isn't even getting  
10 to the clear evidence step.

11 The first step is, hey, what new stuff did you have and  
12 think you can now have a tort claim after the FDA has  
13 already approved your label?

14 And the things that the plaintiff came toward with in  
15 *Dolin* are things that the FDA indisputably knew about.  
16 That's that point in *Dolin*.

17 That's why Your Honor was discussing some of the  
18 specific claims as being things that the FDA knew. I think  
19 we have to do that analysis first.

20 And this is where, the only thing I wanted to cite is  
21 this *In Re: Celexa* case. This is the First Circuit. And I  
22 really just wanted to -- they talk about the back and forth  
23 between the Court.

24 And, so, this is the inquiry that we have to do for  
25 each of the claims. I've got to be honest. I've been doing



1 this a long time. I've never seen so many different  
2 sporadic attacks on a label and a physician label. Usually  
3 when we get to these failure to warn cases, there are one or  
4 two very specific things that are being challenged. And  
5 then from there you go, okay, you challenge that. Now did  
6 that make a difference in this particular patient's case?

7 Yeah, the doctor said, "If I had known that, I would  
8 have changed my behavior completely." And then you have  
9 your claim that gets around pre-emption.

10 Here we have to ask this question: What specific  
11 statements are you saying that we should have put in our  
12 label or warning? And each one requires a specific analysis  
13 under the pre-emption framework.

14 Thank you, Your Honor.

15 THE COURT: All right. Thank you.

16 All right. With respect to the defendant's motion both  
17 at the close of plaintiffs' evidence and at the close of all  
18 the evidence seeking to apply pre-emption to all the claims,  
19 I grant it in part in that the Court finds that any claim by  
20 the plaintiffs that the Medication Guide should be modified  
21 to include the warnings or statements that plaintiff has  
22 proffered is pre-empted.

23 The Court finds that with respect to the Medication  
24 Guide, the regulations do not permit the manufacturer to  
25 unilaterally or in advance make changes to the Medication

1 Guide.

2 So the Court finds that those things are pre-empted.

3 I deny the motion with respect to the remaining claims.

4 I find that the plaintiff -- the defendant has not

5 established that the other claims are pre-empted. The Court

6 believes that the CBE process offers to BI the authority and

7 opportunity to make the changes that plaintiffs advocate in

8 their tort claims without advance FDA approval. As such,

9 the Court does not believe that the claims are pre-empted.

10 So I grant in part and deny the balance.

11 Now let's go to the motion with respect to directed

12 verdict. To be blunt, it's already getting late. I'm

13 prepared to go ahead and rule. I've heard from the parties

14 on both of these.

15 I'm going to deny the defendant's motions.

16 Let me find my copy of the defendant's motion. Hold on

17 a minute.

18 (Pause)

19 THE COURT: All right. The first issue that the

20 defendant raised was that plaintiffs have not shown that

21 Pradaxa caused or contributed to Ms. Knight's injury.

22 I find taken in the light most favorable to the

23 plaintiffs there is sufficient evidence for the jury to

24 determine that.

25 Dr. Ashhab testified that the location and nature of

1 the GI bleed that she suffered is consistent with one being  
2 caused or worsened by the Pradaxa that she was on.

3 He indicated that -- he testified that there was a  
4 greater risk of a major life-threatening bleed as a result  
5 of the Pradaxa than there had been on warfarin.

6 That and the other testimony I believe is sufficient to  
7 take that issue to the jury.

8 Next, the defendant argues the plaintiffs have not  
9 shown proximate cause. This part of the motion is addressed  
10 to whether or not there's evidence that Ms. Knight upon a  
11 different set of warnings may have acted in a way to avoid  
12 her injury.

13 Here the Court finds that taken in the light most  
14 favorable to the plaintiffs, there is evidence that, first,  
15 Ms. Knight's children saw -- at least one of them saw an ad  
16 about the advantages of Pradaxa for patients who have AFib  
17 and are on otherwise warfarin which requires a long-term  
18 monitoring.

19 They approached Betty about it. Together the three of  
20 them went to see her treating physician. They spoke with  
21 the nurse practitioner. The two children both testified  
22 that in different ways they were aware of their mother's  
23 decision-making with regard to her use of prescriptions and  
24 treatment and that they also participated in helping her  
25 decide these things.

1       They testified that they were not aware of a number of  
2 factors about Pradaxa that if you believe the plaintiffs'  
3 evidence may lead the jury to conclude that Pradaxa was not,  
4 in fact, a good choice for her; that she was unaware of  
5 these factors and that had she or they been aware either  
6 through advertising or through the discussions with the  
7 doctor or through reading the label, she would have decided  
8 not to go, to take the risk of Pradaxa.

9       So I think there's enough evidence for the jury to  
10 determine proximate cause.

11       Next, the defendant challenges the sufficiency of  
12 plaintiffs' evidence on the express warranty claim. Here  
13 the Court notes that this is a claim based upon West  
14 Virginia law that essentially codifies in West Virginia the  
15 UCC.

16       An express warranty is any affirmation of fact or  
17 promise that relates to the matters that the purchaser would  
18 consider in determining to enter into the, the bargain, the  
19 basis for the bargain.

20       Here plaintiffs have adduced evidence that the warning  
21 and Medication Guide and other information provided to her  
22 was either false or misleading, inadequate.

23       I believe that the West Virginia law does not require  
24 that the plaintiff prove reliance in the same way that the  
25 evidence must support the causation issue with respect to

1 product liability claim under the West Virginia statute. If  
2 the information that's at issue is part of the bargain, then  
3 there's a presumption that if it turned out to be false or  
4 misleading that the plaintiff is -- that that demonstrates  
5 sufficient reliance for alleging a breach.

6 The next is the implied warranty claim. The Court also  
7 finds here the plaintiff has adduced evidence which if  
8 believed would indicate that the drug -- there was an  
9 implied warranty that the drug was safe, would be safe and  
10 effective for Betty even given her patient characteristics;  
11 that it was not, in fact, safe for her and that the  
12 medicine, therefore, breached an implied warranty.

13 Last is the plaintiffs' fraud claim. Here the  
14 plaintiff has submitted evidence that at different points in  
15 time prior to her death the company knew that there were, in  
16 fact, greater risks about the use of Pradaxa for patients  
17 like Betty given her patient characteristics, and that for  
18 reasons related to the profitability of the drug rather than  
19 the safety and efficacy of the drug decided not to add some  
20 of the warnings or make other information generally  
21 available. I think it's not particularly strong, but I  
22 think it's a matter for the jury to determine.

23 And, so, the Court intends to, in keeping with my prior  
24 ruling, include in the verdict form the question of whether  
25 the jury believes that the plaintiffs have proven

1 sufficiently wrongful conduct that would meet the definition  
2 for punitive damages. And then if they return a verdict  
3 favorable to the plaintiff as to that, then have the jury  
4 return for deliberation as to any damages to be awarded.

5 So I'm trying to summarize as best I can my ruling.

6 The Court denies the defendant's motion for directed  
7 verdict.

8 So that leaves us with the damage -- or the jury  
9 instruction issues to resolve. And the Court's prepared to  
10 try to go through that with counsel now.

11 We're going to take just a break for a minute to switch  
12 out court reporters. So I don't know if same counsel are  
13 staying for that part or not. You can switch that out  
14 however you want.

15 MR. MOSKOW: Thank you, Your Honor.

16 (Recess taken at 5:30 p.m.)  
17  
18  
19  
20  
21  
22  
23  
24  
25

1 (Back on the record at 5:32 p.m.)

2 THE COURT: Are you folks ready or do you need a  
3 couple more minutes?

4 MR. LEWIS: We're ready, Your Honor.

5 THE COURT: All right.

6 MR. MOSKOW: We're fine, Your Honor.

7 THE COURT: All right. So first the Court notes that  
8 prior to the start of this part of the proceeding, my law  
9 clerk has given to each side copies of the proposed jury  
10 instructions. These are instructions which include, first,  
11 the base instructions that the parties informed the Court that  
12 they had agreed upon, coupled with a number of instances  
13 within that document that the parties had language that was in  
14 dispute, but they expected the Court to resolve.

15 The Court went through a number of those matters with  
16 the parties. As a result, at the conference yesterday, the  
17 Court essentially ruled on some of the matters that were  
18 raised. But not all matters were in fact raised because we  
19 didn't have enough time. But my clerk has now given to you,  
20 just before this hearing, the draft of the final instructions  
21 that he and I believe embody what the Court decided yesterday  
22 evening and continues to show some of the instructions, which  
23 I think are punitive damage instructions, where the Court has  
24 yet to hear arguments of the parties. And so those  
25 instructions reflect the disputed language between the

1 parties.

2 So at this point, my thought is to just simply go  
3 through the instructions starting at the beginning and hear  
4 counsel as to each one and if there is any objection and, if  
5 so, the basis for it, and then any proposed language that a  
6 party would advocate.

7 All right?

8 MR. MOSKOW: Your Honor, can we respond sitting down  
9 or do we need to stand up?

10 THE COURT: No, you can respond sitting down. That  
11 would be fine.

12 MR. MOSKOW: Thank you, Your Honor.

13 THE COURT: So proposed instruction No. 1 is  
14 introduction.

15 Proposed instruction No. 2 explains direct and  
16 circumstantial evidence.

17 Proposed instruction No. 3 explains credibility.

18 No. 4 defines expert witnesses or expert testimony.

19 No. 5 explains deposition or, in this case, videotaped  
20 testimony.

21 Instruction No. 6 explains the burden of proof.

22 Instruction No. 7 --

23 MS. JONES: Excuse me, Your Honor. Do you want us to  
24 offer our objections to --

25 THE COURT: Yes. And I assumed to this point these



1 were all things that were agreed upon, so I was going to say  
2 that when I got to -- I guess to No. 8 --

3 MS. JONES: Well, the only objection that we just  
4 wanted to note for the record would be to the instruction on  
5 burden of proof, which we've discussed already.

6 That reference in the last three sentences that if the  
7 plaintiffs prove, that the jury may find in favor of them, if  
8 the plaintiffs don't prove, then they may find in favor of BI,  
9 we object to that on the basis that we think that the law  
10 requires that if they find in one way or another, that they  
11 must return a verdict consistent with whichever side they  
12 think prevailed on the burden -- excuse me -- on the  
13 presentation of the evidence.

14 We also think that would be consistent with Your  
15 Honor's pre-charge to the jury. So we don't believe -- we  
16 understand it's a model instruction, but we just don't think  
17 it's consistent with the actual law on what the jury is  
18 supposed to do.

19 THE COURT: Certainly. I reverted to the model.

20 What does plaintiff say?

21 MR. MOSKOW: Plaintiffs request the Court revert to  
22 the model.

23 THE COURT: All right. I'm going to leave it as is.  
24 I deny the objection. The Court is using the pattern  
25 instruction developed by the West Virginia Supreme Court of

1 Appeals and finds it's appropriate to do so because these are  
2 pattern instructions that that court developed for these state  
3 law claims.

4 No. 7, sympathy.

5 No. 8, parties equal under the law.

6 All right. No. 9, do plaintiffs have any objection to  
7 instruction 9?

8 MR. MOSKOW: Your Honor, we are -- I am so used to  
9 standing up. I'm sorry.

10 We're still struggling with the idea of injuries  
11 including her death as opposed to and/or her death, but I  
12 don't think that this misstates the law in West Virginia.  
13 It's just we're concerned about jury confusion where we keep  
14 using the phrase injuries including her death.

15 But I think -- and this is what I mentioned to the  
16 Court at side bar yesterday. I think to a certain extent this  
17 is resolved by the verdict form. In the plaintiffs' proposed  
18 verdict form, we have a separate line item for a finding of  
19 injuries and a finding of death, and we would be -- I think  
20 that resolves the issue that we would have with this  
21 particular charge.

22 MS. JONES: We haven't gotten to the verdict form. We  
23 have an objection to doing that in the verdict form. We think  
24 this reference here to injuries including her death is what  
25 the Court used in the pre-charge. It's throughout the current

1 version of the instructions. We think it's an appropriate  
2 statement of the law as I understand Mr. Moskow to have agreed  
3 with.

4 So I think it is --

5 THE COURT: All right. I'm going to leave the  
6 instruction as I have provided it. The parties are certainly  
7 free in their closings to explain.

8 And here it is the case that plaintiffs have two types  
9 of claims of injury. One is that they have a claim for the  
10 injuries suffered by Betty Knight from the time of her bleed  
11 up to her death. That is a surviving personal injury claim.  
12 And then secondly there is the wrongful death claim, a claim  
13 that is dependent upon the defendant's conduct causing or  
14 contributing to her death, and that's a wrongful death claim.  
15 And so counsel certainly can explain that these are each  
16 separate types of damage that can be considered if the jury so  
17 finds.

18 MR. MOSKOW: Thank you, Your Honor.

19 THE COURT: Next is the proximate cause instruction.  
20 Any objection to it?

21 MS. JONES: No, Your Honor.

22 THE COURT: Next is the -- it's labeled proposed  
23 instruction No. 6, necessity of expert testimony.

24 MR. MOSKOW: Your Honor, the plaintiff just renews the  
25 objection that we previously made. We understand that this is

1 the Court's ruling over that objection.

2 THE COURT: All right. I would deny the plaintiffs'  
3 objection. I would find that in a pharmaceutical product  
4 liability case, expert testimony is necessary for plaintiffs  
5 to meet their burden.

6 Next is the limiting instruction. It consists of  
7 three parts, foreign labeling, failure to test, and relevance  
8 of the physician warning. So do the parties have objections  
9 to any part of these three paragraphs?

10 (Defense counsel conferring.)

11 MS. JONES: Your Honor, from -- I apologize.

12 From the BI side, no objection, but we do think this  
13 is the appropriate place to include an instruction to the jury  
14 on the Medication Guide. We submitted a proposal to the Court  
15 I believe earlier today. I think plaintiffs also submitted  
16 some red lines on that.

17 We may need to discuss that separately, but we do  
18 think that needs to be incorporated into the instructions --

19 THE COURT: All right. We'll get to that in a few  
20 minutes. But as to the instruction as tendered by the Court,  
21 you have no objection to what is stated on pages 15 and 16?

22 MS. JONES: Your Honor, given what you ruled on the  
23 directed verdict motion, I think what we had proposed with  
24 respect to failure to test, it's encapsulated in that ruling.  
25 And we articulated the reasons that we think the jury should

1 be specifically advised that the company can't be held liable  
2 for a failure to warn about whether certain testing was done  
3 or not, but we certainly understand Your Honor's directed  
4 verdict decision.

5 THE COURT: All right. How about from the plaintiffs?

6 MR. CHILDERS: Thank you, Your Honor.

7 On the foreign labeling, no objection.

8 On the failure to test, the second sentence of the  
9 proposed instruction reads: Under the law, BI cannot be held  
10 liable for failure to perform clinical testing on Pradaxa.  
11 What we had proposed is plaintiffs in this case are not making  
12 any claim against Boehringer for failure to perform clinical  
13 testing on Pradaxa. We think that rather than commenting on a  
14 claim that is not being made, saying it can't be made, we can  
15 just say it's not being made.

16 MS. JONES: Frankly, Your Honor, given the way the  
17 case has been tried, and there's been an awful lot of talking  
18 about testing, I think they need to be directly instructed  
19 that there is no -- there is no legal basis for a claim for  
20 failure to test something with respect to Pradaxa.

21 We don't think it's sufficient just to say they are  
22 not making the claim. I think they need to get a pretty  
23 strong instruction on that given the way the evidence has come  
24 in. So we're satisfied with the way it's written now.

25 THE COURT: Well, how about I do this. I'm going to

1 add language that will say, under the law, BI is not -- well,  
2 plaintiff is not making a claim, and BI not cannot be held  
3 liable for a failure to perform clinical testing.

4 MR. MOSKOW: Thank you, Your Honor.

5 THE COURT: So that it's clear that it's not the  
6 claim, and they can't be liable.

7 MS. JONES: That's fine with us.

8 THE COURT: All right. I'm going to add that  
9 language.

10 MR. MOSKOW: Thank you, Your Honor.

11 And then page 16, the relevance of physician warnings.

12 THE COURT: Yes.

13 MR. MOSKOW: I just renew our objection, which I know  
14 the Court has already ruled on, which is that this singles out  
15 a particular type of testimony as opposed to all of the  
16 evidence in the record, and we think it highlights as opposed  
17 to instructing, and we object on that basis.

18 THE COURT: All right. I disagree. I deny it. The  
19 parties are certainly free to argue about the other things  
20 that may be considered as part of the sufficiency of the  
21 warnings.

22 MR. MOSKOW: Thank you, Your Honor.

23 THE COURT: Next, it was labeled 21, compliance with  
24 safety standards.

25 MR. MOSKOW: No objection from plaintiffs, Your Honor.

1 MS. JONES: Your Honor, we still have an objection to  
2 the last sentence of proposed instruction No. 21:  
3 Noncompliance with appropriate regulations is competent  
4 evidence that BI did not exercise due care in marketing  
5 Pradaxa. We don't think there is any evidence that the  
6 company failed to comply with appropriate regulations, and so  
7 we don't think that is an instruction that applies to the  
8 evidence in this case. So we don't think the instruction is  
9 appropriate.

10 THE COURT: Well, I have looked quickly at some of  
11 Dr. Plunkett's testimony. I'm not going to claim I've gone  
12 through all of it, but I did find in more than one place where  
13 she talks about the federal regulations that apply, which  
14 essentially require the company to provide clinical data and  
15 other supporting information.

16 As I understand it, it's plaintiffs' theory that BI  
17 didn't do that, that you withheld information, for instance,  
18 what we discussed moments ago about monitoring and whether  
19 there was a need for a threshold monitoring or determination  
20 of blood plasma and monitoring thereafter. So I'm going to  
21 include it.

22 But what I think I'm going to do is instead of saying  
23 noncompliance, I'm going to say failure to comply with  
24 appropriate regulations is competent evidence.

25 Any objection to that language given my ruling that

1 some version of this is going to --

2 MS. JONES: We would have the same objection, Your  
3 Honor --

4 THE COURT: Okay.

5 MS. JONES: -- for the reasons that we have already  
6 discussed in our earlier session.

7 THE COURT: Well, I do think it's appropriate to call  
8 this failure to comply with regulations rather than simply  
9 noncompliance.

10 No. 27, learned treatises, any objection from the  
11 parties there?

12 MR. MOSKOW: No objection, Your Honor.

13 MS. JONES: No objection, Your Honor.

14 THE COURT: All right. Now we get into the strict  
15 liability, page 19. Any objection there?

16 MR. MOSKOW: I don't believe so, Your Honor, but give  
17 me one second.

18 THE COURT: Okay.

19 MS. JONES: And same, Your Honor, I don't think we had  
20 anything on that.

21 MR. MOSKOW: No objection from plaintiffs, Your Honor.

22 THE COURT: All right. Page 20, effectiveness  
23 defined?

24 MS. JONES: No objection from BI, Your Honor.

25 MR. MOSKOW: No objection from plaintiffs, Your Honor.



1 THE COURT: All right. Next, No. 14, the so-called  
2 strict liability failure to warn.

3 First, I'll note that the last two paragraphs that are  
4 in the instruction I have put in there at the request of  
5 plaintiffs over the objection of defendant. The Court finds  
6 that the first statement, which refers to the duty to warn  
7 patients directly, is a proper and necessary statement as to  
8 the element of West Virginia law given the law that applies to  
9 this particular case.

10 And then I think similarly the last paragraph, which  
11 consists of those two sentences, is also consistent with the  
12 West Virginia law that applies here. So I've denied  
13 defendant's objection to that language.

14 Is there any other objection or matter that the  
15 parties want to raise?

16 MR. MOSKOW: No, Your Honor, on behalf of plaintiffs.

17 MS. JONES: I think we've made our objection, Your  
18 Honor.

19 THE COURT: All right. Good enough.

20 Next on page 22, proposed instruction 15, negligence.  
21 The Court notes that at the bottom of this instruction, the  
22 same two paragraphs just discussed were added at the request  
23 of plaintiffs over the same objection of the defendant.

24 Other than that objection from the defendant, do the  
25 parties have any other objections to this instruction?

1 MR. MOSKOW: No objection from plaintiffs, Your Honor.

2 MS. JONES: Nothing for BI, Your Honor.

3 THE COURT: All right. No. 16 on page 24, the basic  
4 standard of care, any objection to that instruction?

5 MR. MOSKOW: None from plaintiffs, Your Honor.

6 MS. JONES: Nothing from BI.

7 THE COURT: All right. No. 17, warning causation.  
8 (Plaintiffs' counsel conferring.)

9 MR. MOSKOW: Plaintiffs raise no further objection.  
10 We previously discussed plaintiffs' concern about whether the  
11 language should be to Mrs. Knight or Mrs. Knight and her  
12 family in light of the evidence that came in. Plaintiffs make  
13 no further objection.

14 THE COURT: All right. Well, I've rejected the notion  
15 that the instruction should consider warnings to the family  
16 members because the duty is to warn the patient. So I  
17 rejected plaintiffs' request that we include a reference to  
18 the family.

19 Any objection from the defendant?

20 MS. JONES: No objection, Your Honor.

21 But Mr. Hailey, who has eagle eyes, mentions that on  
22 line 4, in the sentence that begins, In other words, plaintiff  
23 should be changed to plaintiffs plural.

24 THE COURT: All right. We'll fix that.

25 Next, express warranty, No. 26, essential elements.

1 MR. MOSKOW: No objection from plaintiffs, Your Honor.

2 MS. JONES: Same, Your Honor, nothing from BI.

3 THE COURT: No objections from --

4 MS. JONES: No objection. I apologize.

5 THE COURT: I didn't hear you very well.

6 Implied warranty, No. 19.

7 MR. MOSKOW: No objection from plaintiffs, Your Honor.

8 MS. JONES: Nothing from BI, Your Honor.

9 MR. MOSKOW: I should just renew for the record we had

10 requested that further information from the pattern

11 instruction be provided that referenced the statute 46-2-314.

12 And the Court considered that and entered the language that

13 you chose.

14 THE COURT: All right. Next, the -- was that implied

15 warranty?

16 MS. JONES: It was.

17 THE COURT: All right. Then next on page 28, the

18 fraud instruction.

19 MR. MOSKOW: Plaintiff has no objection, Your Honor.

20 MS. JONES: No objection from BI.

21 THE COURT: No. 22, general wrongful death?

22 MR. MOSKOW: Your Honor, I believe that's been edited

23 to comply with the parties' agreement. We have no objection.

24 MS. JONES: Agreed. No objection, Your Honor.

25 THE COURT: All right. Now we get to these punitive

1 damages claims. And so as I understand it, plaintiffs  
2 tendered the West Virginia pattern instruction, and that is  
3 reflected in what is before me. But then the defendant  
4 asserted some changes, either striking some things and adding  
5 some things.

6 As I understand it, Ms. Jones, you would add what is  
7 printed in bold type and strike what is deleted or stricken  
8 through.

9 First, the strikethroughs on this instruction 23 are  
10 consistent with this Court's ruling that, first, the jury  
11 would have to determine that there is a basis to find conduct  
12 that would result in punitive damages. And if they do, then  
13 after that return of a verdict, the Court would instruct them  
14 on damages, and they would make a separate new determination  
15 of damages.

16 So the Court agrees that -- does plaintiff have any  
17 objection to that approach in striking that language from the  
18 instruction?

19 MR. MOSKOW: With the understanding that should the  
20 jury find, as part of the bifurcated process, that language  
21 would be then read to the jury, we have no objection.

22 THE COURT: Okay. Then I take it that the plaintiffs  
23 object to the proposed language from the defendant that is  
24 typed in bold.

25 So you want to explain your objection?

1 MR. MOSKOW: Yes, Your Honor.

2 We believe that that creates an obstacle to the jury's  
3 finding of punitive damages that is not consistent with West  
4 Virginia law or the pattern instruction. In fact, it's  
5 requiring that there be a specific effort to -- that we have  
6 to prove that there was a specific effort to warn her. To  
7 disprove a negative is virtually impossible in a case like  
8 this.

9 So the pattern instruction as written allows the jury  
10 to reasonably consider all of the evidence to determine  
11 whether or not the conduct was sufficiently egregious, in  
12 reckless disregard for patient safety.

13 THE COURT: Okay. What says the defendant?

14 MS. JONES: We're talking about instruction No. 24; is  
15 that right?

16 MR. MOSKOW: I'm on 23.

17 THE COURT: No, 23.

18 And really the only thing that is at issue is the one  
19 sentence in bold, the first one, that says: If you find that  
20 BI made an effort to warn about the dangers of Pradaxa that  
21 plaintiffs claim caused Mrs. Knight's death, then you may not  
22 find that BI acted with actual malice.

23 MS. JONES: Well, the basis for that proposal, Your  
24 Honor, is from the Ilosky case, which is cited on page 32. We  
25 think on these particular facts, and we know there was a

1 warning that was provided -- whether or not there are  
2 criticisms of the warning is a separate issue -- we think  
3 that's an appropriate instruction given the evidence.

4 THE COURT: Well, I disagree. I think simply stating  
5 that if BI made an effort to warn about the dangers, there  
6 might not be a -- the jury is not allowed to find that BI  
7 acted with malice, I think that's an incorrect statement. I  
8 don't think that's an accurate statement of the law.

9 It's much too vague, first of all, to say that an  
10 effort to warn could defeat the balance of plaintiffs' proof,  
11 if the jury would believe it, that there was actual malice.  
12 So I'm not -- I'm going to reject that language.

13 I certainly agree and would perhaps entertain some  
14 type of statement consistent with Ilosky that in determining  
15 whether the defendant's conduct rises to the necessary level,  
16 the jury may consider the extent to which the defendant  
17 provided or attempted to provide warnings. I think something  
18 like that would be accurate, but I think this is too vague and  
19 inaccurate.

20 MS. JONES: Understood, Your Honor. If it makes  
21 sense, we're happy to type something up and share it with the  
22 group.

23 THE COURT: Well --

24 MR. MOSKOW: Your Honor, I think at this late hour, it  
25 really impacts the parties' ability to prepare for closing. I

1 think the pattern instruction takes into account circumstances  
2 like this and, you know, it specifically says, you know, that  
3 we have to prove by clear and convincing evidence and, as  
4 written, shown by conduct that was intended to or was  
5 substantially certain to injure Mrs. Knight. So there is  
6 already a specific component to this that takes into account  
7 the circumstances of this case.

8 MS. JONES: I think what Your Honor was suggesting was  
9 probably a sentence, maybe two. I don't know that it's a  
10 terribly disruptive exercise to at least consider it.

11 THE COURT: Well, here's what I'm willing to do. If  
12 you will draft something, provide it to the plaintiffs, if you  
13 can keep it like one sentence, I will consider it, and we'll  
14 take it up first thing in the morning.

15 MS. JONES: Okay. Thank you, Your Honor.

16 THE COURT: Next, instruction 24.

17 MS. JONES: Your Honor, I'm sorry.

18 On instruction No. 23, the additional bolded language  
19 that I just made clear --

20 THE COURT: Yeah, that stays in.

21 MS. JONES: That stays in. Okay. Got it.

22 THE COURT: That's consistent with the way we're  
23 handling --

24 MS. JONES: Okay.

25 MR. MOSKOW: We have no objection to that, Your Honor.

1 THE COURT: So that stays in.

2 MS. JONES: Got it.

3 THE COURT: Defendant has proposed 24. Plaintiff  
4 objects. Why?

5 MR. MOSKOW: Plaintiffs object, Your Honor, for two  
6 reasons.

7 One, because it's an inconsistent statement to the  
8 prior statement about compliance with safety standards. So to  
9 the extent that it says punitive damages are not appropriate  
10 when the defendant complied is probably going to lengthen it  
11 to say punitive damages are appropriate when there is evidence  
12 that the defendant did not comply.

13 I think we start creating a morass here. The pattern  
14 instruction was designed to capture both this and proposed  
15 instruction 25 and 26, and I don't think there's a need to  
16 provide this instruction.

17 THE COURT: Do you want to respond?

18 MS. JONES: Sure, Your Honor. I don't know that I  
19 have a much more detailed response than what I offered in  
20 connection with instruction No. 23, which is we think this is  
21 an appropriate addition to the pattern instruction in light of  
22 the specific facts in this case, namely that we know that the  
23 company made a warning available.

24 THE COURT: Well, I'm going to refuse it. The pattern  
25 instructions do not include at least instructions similar to



1 this. I think this is a matter best left for argument by  
2 counsel as to what the evidence is.

3 No. 25.

4 MR. MOSKOW: Plaintiff objects again on the same  
5 basis.

6 And, in fact, for this one, the language in the  
7 pattern instruction specifically talks about conduct addressed  
8 to Mrs. Knight. This is just a repetition of that. We think  
9 it's superfluous and unnecessary.

10 MS. JONES: Your Honor, I may be able to save us some  
11 time.

12 I think 25 and 26 are both instructions where we would  
13 offer the same response, which is we think the facts of the  
14 case justify including them. We assume there's an objection  
15 as to 26 as well. But I don't know that we have distinct  
16 responses on those two proposed additions.

17 THE COURT: Well, I'm going to reject both of them. I  
18 think these are all matters that are for the parties to argue  
19 and the jury to determine the facts. And I think as to 25,  
20 the pattern instruction adequately explains that the jury must  
21 be making its determination about punitive -- a finding of  
22 punitive -- a violation of a duty that creates punitive  
23 damages and any damages to be awarded has to be based on harm  
24 to Mrs. Knight.

25 As to No. 26 about scientific issues, I don't think

1 that's a proper instruction and would actually serve to simply  
2 confuse a jury. So I'm going to deny it.

3 Next, No. 29 on page 36, damages.

4 MR. MOSKOW: Plaintiff has no objection, Your Honor.

5 MS. JONES: No objection from BI, Your Honor.

6 THE COURT: All right. Then on page 38, instruction  
7 30, plaintiff's prior condition.

8 MR. MOSKOW: Plaintiff has no objection, Your Honor.

9 MS. JONES: We had no objection to that instruction,  
10 Your Honor. That's the pattern --

11 THE COURT: No. 31, concurrent negligence?

12 MR. MOSKOW: Plaintiff has no objection, Your Honor.

13 MS. JONES: We do have an objection to instruction 31  
14 on concurrent negligence. As we've mentioned before to the  
15 Court, we don't believe that there's been any suggestion or  
16 evidence that there was concurrent negligence by any other  
17 party.

18 To the extent that the claim is, well, perhaps they're  
19 going to argue that her doctors made some kind of mistake, our  
20 position has always been that her doctors made a perfectly  
21 reasonable medical judgment with respect to Mrs. Knight's  
22 care, so we don't think it's an appropriate instruction based  
23 on the evidence.

24 MR. MOSKOW: Both Dr. Shami and Dr. Crossley testified  
25 as to the practice of reading labels each time a prescription

1 is made and specifically identified the restart of Pradaxa  
2 after the stent procedure in April of 2013 as a meaningful  
3 issue for the jury to consider, suggesting that the label had  
4 been updated as of that time and, you know, that that doctor  
5 might have done something wrong if she continued on a P-gp  
6 inhibitor and a -- and Pradaxa.

7 So based on the evidence already adduced at trial, we  
8 believe this is an appropriate instruction.

9 (Defense counsel conferring.)

10 THE COURT: Response?

11 MS. JONES: Our introduction of that evidence was not  
12 intended to suggest that any one of Mrs. Knight's doctors  
13 engaged in any kind of negligence. That has not been the  
14 testimony. That has not been the presentation that we have  
15 offered.

16 THE COURT: In fact, both of those doctors testified  
17 that they did not fault any of the doctors who provided these  
18 prescriptions, much less any of the other treatment that Betty  
19 received during the course of her being on warfarin or later  
20 Pradaxa.

21 MS. JONES: I think Dr. Crossley literally said they  
22 did a marvelous job with her.

23 MR. MOSKOW: While that was testimony that was  
24 offered, there was also testimony that each time that  
25 prescription was renewed, it was an opportunity for the doctor

1 to read the label. And --

2 THE COURT: A label that the same witnesses said was  
3 sufficient.

4 MR. MOSKOW: That's correct, Judge.

5 So we just want to make sure that the jury isn't  
6 confused by on the one hand the doctor saying the care was  
7 fine, and on the other hand saying they had an opportunity to  
8 read the label.

9 THE COURT: Well, perhaps we can resolve this more  
10 simply by does the defense agree that it will not make any  
11 argument at closing that any of the other doctors failed to  
12 meet a standard of care or otherwise negligent in the  
13 prescribing of Pradaxa or in her course of treatment?

14 MS. JONES: We have no intention of making such a  
15 claim or making such an argument.

16 To the extent that we've talked about different  
17 labels, it's been to respond to the fact that they have  
18 challenged various things about the labeling, and we've had to  
19 be able to say, well, this information was in the label at  
20 various points when she was treated.

21 We have absolutely no intention of pointing the finger  
22 at any one of Mrs. Knight's doctors and saying somehow one of  
23 them did something wrong. In fact, our intention is to say  
24 that they did a very good job caring for someone with  
25 complicated medical issues.

1           THE COURT: Based on that representation, I'm inclined  
2 to deny the instruction. Certainly counsel can point out that  
3 there is no claim here, certainly there is no evidence or  
4 argument by the defendant that any of the doctors who  
5 prescribed Pradaxa did so in violation of the standard of care  
6 or in any other way negligent. So I think that you can state  
7 that explicitly and that the defendant cannot dispute that  
8 given the position they've taken here.

9           I am concerned that by adding this instruction, in the  
10 face of the defendant's stated intention not to argue  
11 negligence on the part of anybody else, that it can only serve  
12 to confuse the jury and add to the length of already lengthy  
13 complicated instructions.

14           So I'm going to deny the objection --

15           MR. MOSKOW: The requested instruction.

16           THE COURT: The instruction and your objection.

17           MR. MOSKOW: Thank you, Your Honor.

18           THE COURT: So that takes us to the so-called --

19           MR. MOSKOW: The new Medication Guide instruction?

20           THE COURT: Yes, the Medication Guide instruction. I  
21 had a copy of it right here, and I have undoubtedly put it  
22 with something else.

23           So I've seen the instruction as tendered by the  
24 defense. The plaintiffs have responded with a strike and  
25 insert that alters much of the language.

1 Does the defense object to the proposed changes that  
2 the plaintiffs have sought?

3 MS. JONES: We do, Your Honor. And certainly in light  
4 of your directed verdict motion with regard to the Medication  
5 Guide, we think what we've proposed is entirely appropriate.

6 THE COURT: All right. Hold on a minute. I had a  
7 copy of that just minutes ago, I thought. It's much easier to  
8 work with the strikethrough.

9 Hold on. Blake is getting me a new copy.

10 (Pause in proceedings.)

11 THE COURT: Well, let's walk through the defendant's  
12 objection to these changes so I have a clear understanding.

13 So it looks to me like the first three sentences or so  
14 directly address the Court's ruling on the Medication Guide  
15 and the preclusion of any claims based on it.

16 MS. JONES: I'm sorry, Your Honor. I'm just looking  
17 at it on my computer screen.

18 THE COURT: Sure. Go ahead.

19 Do you have the plaintiffs' strikethrough version?

20 MS. JONES: Yes, Your Honor.

21 THE COURT: That helps a lot with that.

22 MS. JONES: Well, I guess the concern we have with the  
23 first sentence, Your Honor, is that the point of this  
24 instruction is to be very clear with the jury about the fact  
25 that they're not permitted to find a failure to warn with

1 respect to the Medication Guide. It's not supposed to be an  
2 opportunity to remind the jury about the company's obligations  
3 with respect to the Medication Guide.

4 The Court has already included in the failure to warn  
5 instructions, over BI's objection, very similar language that  
6 basically says the company always has responsibility for the  
7 labeling, it has responsibility to keep the label adequate.  
8 So the first sentence is duplicative of something that is  
9 already -- at least the first clause is duplicative of  
10 something that already appears in the instructions.

11 And then I guess the balance of these changes we're  
12 not sure what the reason for them were, but it seems to us  
13 that given where we are in this case, namely that it started  
14 out hot and heavy as a Medication Guide case, the jury has now  
15 seen this list of criticisms rolled in front of virtually  
16 every witness in the case, we need something that is very  
17 direct and makes very clear that the Court has made a  
18 determination that they cannot reach a finding on that basis.

19 We have a very real concern, given the way that the  
20 evidence has come in, and the way the case has been presented,  
21 that there will be confusion on that front if there is any --  
22 if we build in a bunch of nuance on this topic. The purpose  
23 of the instruction is to reflect the fact that the Court has  
24 made a determination that they cannot find failure to warn  
25 with respect to the Medication Guide in any regard, but

1 specifically with respect to those five criticisms that  
2 they've now seen multiple times throughout the course of the  
3 trial.

4 THE COURT: You want to respond?

5 MR. MOSKOW: Yes, Your Honor.

6 Again, labeling is the floor, not the ceiling. If the  
7 Court were to identify specific claims that have already been  
8 ruled in under the state tort claim, but only cannot be  
9 brought as it relates to the Medication Guide, the jury will  
10 certainly be confused as to what they can consider and what  
11 they cannot. So what we tried to do was accomplish a clear  
12 statement that the Medication Guide is not an issue here, but  
13 that the evidence is.

14 You know, while there could be some wordsmithing here,  
15 and I'm certainly, you know, glad to go through it now with  
16 the Court and with the defendant to try to do that, we think  
17 to give the proposal that the defense made is essentially  
18 telling the jury they cannot consider the evidence, and that's  
19 our concern.

20 THE COURT: Okay. Here's what I think I'm going to  
21 do, if you'll just follow along. So we'll work first from  
22 plaintiffs' modified version.

23 MS. JONES: Okay.

24 THE COURT: The first line I'm going to strike all the  
25 way into the second line to where it starts, BI is not



1 permitted. So the instruction will begin by reading: BI is  
2 not permitted to change the patient Medication Guide without  
3 prior FDA approval.

4 I'm going to strike -- after the word and, I'm going  
5 to strike the Court has ruled that. So it will simply say,  
6 after FDA approval, comma: And the plaintiffs are not  
7 bringing a claim based on any failure by BI to change the  
8 patient Medication Guide.

9 I'm going to, consistent with what the plaintiffs  
10 offered, continue it by saying: Thus, when considering if the  
11 warnings provided by BI were adequate, you cannot consider  
12 BI's failure to change the patient Medication Guide as a basis  
13 for your verdict.

14 I'm going to strike -- first, consistent with the  
15 plaintiffs' objection, I'm going to strike that whole sentence  
16 that starts, Specifically you may not find. Then, coming down  
17 to the next sentence that starts, However you may consider,  
18 I'm going to strike that sentence.

19 And then after that sentence, I'm going to strike the  
20 word additionally and have the last line as plaintiff  
21 tendered, which would then read: Because BI can change the  
22 physician label without prior FDA approval, you may consider  
23 if the physician label fails to properly warn about the true  
24 nature of Pradaxa's bleeding risks and fails to properly  
25 instruct doctors on how to identify or minimize bleeding risk.

1 I think that encompasses the Court's ruling about the  
2 Medication Guide not forming the basis of a claim. The  
3 language that's in the sentence starting specifically that the  
4 defendant tendered I found confusing. Because while it's  
5 clear that the Medication Guide can't be faulted for not  
6 explaining one, two, three, four, five, one, two, three, four,  
7 five remains a part of plaintiffs' labeling deficiency claim.  
8 And I think to state it this way here, after saying that there  
9 is not a claim based on the Medication Guide, would confuse  
10 the jury about the balance of the claims.

11 I have ruled that the claims based on an alleged  
12 deficient label that involved one, two, three, four, five are  
13 not preempted.

14 So you can state your objections to that now if that's  
15 the case.

16 Do you follow along?

17 (Off-the-record discussion with law clerk.)

18 (Counsel conferring.)

19 THE COURT: Do you want me to go through it again?

20 MS. JONES: No, we're just conferring.

21 THE COURT: That's fine. Sure. I just want to make  
22 sure everybody knows what the words are.

23 (Counsel conferring.)

24 MS. JONES: Your Honor, can I just respond to what  
25 you've proposed?

1 THE COURT: Yeah, sure.

2 MS. JONES: Okay. So we would have an objection to  
3 maintaining these references to failure by BI to change the  
4 patient Medication Guide. We understand Your Honor's ruling  
5 on the Medication Guide to be that they are not permitted to  
6 make a finding of liability with respect to defects in the  
7 Medication Guide, so that is why we think the language that we  
8 proposed is the appropriate language.

9 Because the challenge is not -- the preemptive claim  
10 is not just that we failed to change something. The  
11 preemptive claim is that we failed in any way to warn about  
12 something in the Medication Guide. That's the scope of the  
13 preemption ruling as we understand it. We think this  
14 reference here to whether or not the company changed something  
15 or not is really not consistent with what the ruling is as we  
16 understood it.

17 THE COURT: Okay. Let's stop there.

18 What do you say to that? I think I understand your  
19 position.

20 MR. MOSKOW: Your Honor --

21 THE COURT: So it's really, I guess, sort of twofold.  
22 You can't claim that the Medication Guide should have been  
23 changed to reflect new warnings, and you can't complain that  
24 Medication Guide was deficient as at the time because it was  
25 approved by the FDA.

1 MR. MOSKOW: So perhaps we can --

2 THE COURT: Use the microphone so she can hear you.

3 MR. MOSKOW: Perhaps we could say you cannot consider  
4 the Medication Guide to be inadequate or BI's failure to  
5 change the Medication Guide as a basis for your verdict.

6 THE COURT: Why don't we just say not bringing --  
7 plaintiffs cannot bring a claim based on any defect in the  
8 patient Medication Guide. Does that do it?

9 MS. JONES: We think that is a much closer statement  
10 in terms of what we think the implications of Your Honor's  
11 ruling is.

12 THE COURT: I see your point, and I agree with it,  
13 that the Medication Guide has been attacked as being  
14 insufficient from the beginning at the launch and then not  
15 changed later. I agree, so I'm going to change that to a  
16 claim based on any defect in the patient Medication Guide.

17 MR. MOSKOW: Then how does that language change in  
18 the -- I believe it's the third sentence now, Thus when  
19 considering?

20 THE COURT: I think that that is probably right given  
21 my ruling. I think we have to make the change there, too.

22 MR. MOSKOW: I'm just trying to figure out what it  
23 would say.

24 So you may not consider any defect in the patient  
25 Medication Guide or any -- that's why --

1 THE COURT: Yes, I think that's what we should say.

2 MS. JONES: Well, I guess on the subject of defect,  
3 Your Honor, we would propose that before the word defect both  
4 in the second sentence -- I guess it's the first sentence, it  
5 should refer to alleged defect.

6 MR. MOSKOW: Except that we're saying that we're not  
7 making the claim, so that is --

8 THE COURT: Yeah, I don't think we need to say alleged  
9 there. So I'm going to make it consistent with the first  
10 sentence. Thus, when you're considering if the warnings  
11 provided by BI were adequate, you cannot consider any defect  
12 in the patient Medication Guide as a basis for your verdict.

13 MR. MOSKOW: With the understanding, Your Honor, that  
14 plaintiff objects to this charge in its entirety --

15 THE COURT: Right.

16 MR. MOSKOW: -- the language proposed by the Court is  
17 fine.

18 THE COURT: Got it.

19 MS. JONES: And we would maintain our objection, Your  
20 Honor, to actually eliminating the specific criticisms that  
21 the jury has seen so many times.

22 If this was a case where that had not been so  
23 prominently featured with every single witness, we might not  
24 even be proposing that. But we are concerned, given how much  
25 they've seen of that list, that they may not be entirely clear

1 about what they can and cannot do.

2 THE COURT: Well, they are now being instructed, I  
3 think clearly, that the Medication Guide -- any deficiency in  
4 the Medication Guide is not a permitted claim. It's not a  
5 claim plaintiff is bringing, and it's not a claim that can  
6 support a verdict. But the Medication Guide is a source of  
7 evidence about what is warned or not and, as such, it's  
8 evidence in the case, and I don't think that it's appropriate  
9 to tell the jury that they can't consider what is in the  
10 Medication Guide.

11 Further, as I tried to say awhile ago, in your  
12 sentence beginning specifically, you list five things that are  
13 sort of summaries of the plaintiffs' claims of what is  
14 inadequate in the defendant's warnings. Of course, those  
15 warnings aren't restricted to the Medication Guide, they're  
16 criticisms of the labeling as a whole as well. And so I think  
17 it's confusing and perhaps misleading to the jury to tell them  
18 that they can't find liability based upon those things.

19 I'm just not sure they will recognize what I think the  
20 instruction otherwise does successfully, which is to tell them  
21 it's not the Medication Guide that is alleged to be  
22 insufficient, but these are insufficiencies that the jury may  
23 consider in determining whether the label is in compliance. I  
24 don't know how else to explain it.

25 But if you feel like you've adequately stated your

1 objections to my ruling, and I've tried to state my ruling,  
2 I'm ready to move on.

3 MS. JONES: Well, with respect to that sentence, Your  
4 Honor, we understand.

5 On the last sentence, I'm just looking at it one more  
6 time. You may -- would it read you may consider if the  
7 physician label fails to properly warn about the true nature  
8 of Pradaxa's bleeding risk and fails to properly instruct  
9 doctors on how to -- is that what it would say?

10 THE COURT: Well, that's what is in there now.

11 MS. JONES: Well, I guess we'd object to that.

12 One, I don't think that language tracks with what the  
13 jury has already been instructed on what the duty to warn is.  
14 Two is, I think the jury already has been given an instruction  
15 on what they're supposed to consider with respect to the  
16 company's duty to warn and, as I mentioned, is not consistent  
17 with what is written here.

18 So this is supposed to be an instruction that gives  
19 them clarity on what they're supposed to do about the  
20 Medication Guide in light of the Court's ruling. We think  
21 that is gratuitous given that.

22 THE COURT: In response, what I'm going to do subject  
23 to comment from the plaintiffs, is if you look at the last two  
24 lines, after the phrase, Fails to properly warn, put a period  
25 and end it there.

1           That explains in essence the preemption decision I've  
2       made, which is the Medication Guide can't be the basis of a  
3       claim, but the label may be for failure to warn.

4           (Defense counsel conferring.)

5           MR. MOSKOW: Your Honor, we would propose that the  
6       word adequate -- well --

7           THE COURT: It says properly warn.

8           MR. MOSKOW: Again, subject to our objection to the  
9       charge being given as a whole, that is acceptable to  
10      plaintiffs, Your Honor.

11          MS. JONES: Also, again subject to our objections that  
12      we talked about already, I think this will be fine for us.

13          It would be helpful at some point, even if it is early  
14      in the morning, just to see the final version of that  
15      instruction.

16          THE COURT: Well, law clerks love to work late.

17          MS. JONES: Oh, I'm so sorry, Blake.

18          THE COURT: And he's working on all this. He'll have  
19      all this, and I'll make a couple of comments about that a  
20      little bit later.

21          MS. JONES: Okay. Great.

22          THE COURT: So we'll probably have this in a draft  
23      form in a minute, and I'll explain what I mean about that.

24          MS. JONES: Okay.

25          THE COURT: In any event, the next question is where



1 do we put this instruction that we last crafted?

2 MS. JONES: Well, we had contemplated putting it in  
3 with the other limiting instructions.

4 MR. MOSKOW: On page 15 and 16.

5 THE COURT: I think where it would naturally go would  
6 be in the section after relevance of physician warnings.

7 MR. MOSKOW: Plaintiff has no objection to that, Your  
8 Honor.

9 MS. JONES: I'm sorry. What page is that, Your Honor?

10 THE COURT: It would be on page 16.

11 MS. JONES: That's fine, Your Honor.

12 THE COURT: It's the third paragraph in the limiting  
13 instruction. It looks like to me that it make sense to go  
14 there.

15 MS. JONES: Okay. That's fine.

16 THE COURT: Okay. So that is where we'll put it.

17 (Off-the-record discussion with law clerk.)

18 THE COURT: All right. Are there any other objections  
19 that the parties want to make to the proposed instructions?

20 MR. MOSKOW: Your Honor, plaintiffs would just  
21 reassert any objections that we made during the various  
22 conferences we've had with the Court. To the extent that  
23 they've been overruled, they've been made on the record, and  
24 we have no further objection.

25 THE COURT: Okay. And I assume you're satisfied -- I

1 think we've only had one discussion about instructions before  
2 this one. Obviously we've heard considerable argument about  
3 the motions that greatly affect the instructions. But if  
4 you're satisfied with that preserving your objections, that is  
5 fine.

6 MR. MOSKOW: We are, Your Honor. Thank you.

7 THE COURT: Okay. What about the defendant, anything  
8 else?

9 MS. JONES: The same as to us, Your Honor.

10 THE COURT: So the last thing that he's going to need  
11 to do -- and maybe he'll get down there, it will take a few  
12 minutes, and we'll e-mail these to you.

13 You know, we've been using essentially your titles and  
14 numbers. We did that to try to make it easier for all of us  
15 to find the original proposed instructions and the iterations  
16 of it after that. Blake will go through and take all that  
17 out, and it's going to read as pretty much a narrative.

18 MR. MOSKOW: Right.

19 THE COURT: I will say that my experience has been  
20 that with complicated cases like these, jurors almost  
21 inevitably ask for a copy of the instructions. So in order to  
22 do that, typically I give a standard instruction to the  
23 jurors, at the time they make a request, that we're going to  
24 provide those, and that they should not focus on just one  
25 word, consider them as a whole and the instructions given

1 throughout the trial.

2 But, in addition, because when we print these off we  
3 use a format that is basically an outline where we have some  
4 things in bold -- that is just how we outline it -- I usually  
5 also either delete all of that from it or tell them to ignore  
6 that, so that they understand any title of an instruction or  
7 any number of an instruction is just my organizational  
8 shortcut and not part of the instruction.

9 If Blake could do it tonight, I think I'm probably  
10 going to ask him just to take all of those things out and run  
11 this as a narrative instruction and be prepared if the jury  
12 asks to consider giving that to them.

13 You can tell me now, if you know, do the parties  
14 object to providing instructions to the jury?

15 MR. MOSKOW: Plaintiff has no objection either to  
16 providing it or in the manner the Court has identified.

17 MS. JONES: Same, Your Honor.

18 THE COURT: Do you have objection to me making the  
19 instructions available to them immediately without their  
20 request, after we have sent them back to deliberate?

21 MR. MOSKOW: Plaintiff would request that, Your Honor.

22 MS. JONES: No objection to that, Your Honor.

23 THE COURT: All right. Well, that's what I think I'll  
24 do here. I'd rather them not, in a complex case like this,  
25 spin their wheels for half an hour or six hours, and then come

1 back and say we really need those instructions. So I'm  
2 inclined to give them one set of the instructions at the time  
3 we send them in.

4 So Terry told me that you all have finished all of the  
5 exhibit introduction and all that.

6 Have you had discussion about -- typically everything  
7 admitted goes to the jury.

8 MR. LEWIS: Yeah, I believe we're going to meet at  
9 8:00 a.m., the parties.

10 THE COURT: Okay.

11 MR. LEWIS: We have a system in place to prepare the  
12 binders for the jury.

13 THE COURT: That would be great.

14 The other thing is that I think, because of the volume  
15 of the exhibits, I'm inclined to make available to the jury,  
16 along with the exhibits, the exhibit list that the clerk has  
17 maintained showing by number and a short title what everything  
18 is so that they can use that if they start sifting through  
19 these things to find something in particular.

20 Is that agreeable?

21 MR. MOSKOW: It's agreeable to the plaintiffs, Your  
22 Honor.

23 MR. LEWIS: Yes, Your Honor.

24 THE COURT: All right. Is there anything else that we  
25 need to take up this evening?

1 MR. MOSKOW: The verdict form?

2 THE COURT: Oh, okay. Let's do that.

3 I've looked at the two proposed. I don't see that  
4 there is huge difference between them.

5 You both present the first section on liability under  
6 A, plaintiffs' claims, the same.

7 Under B, legal causation, the plaintiffs assert that  
8 there should be essentially a third question asked under legal  
9 causation, that being whether plaintiffs have proven that  
10 Pradaxa proximately caused Betty Knight's injuries. You both  
11 agree that there should be the next statement which deals with  
12 proximate cause of death.

13 Does the defendant dispute that there is a surviving  
14 personal injury claim here?

15 MS. JONES: Well, I think the only question or concern  
16 that we had was whether we in fact need two separate legal  
17 causation questions for the jury to complete.

18 I mean, I think what we had proposed was a single --

19 THE COURT: Well, you only said caused death, and they  
20 want to say caused injury and caused death. I don't mind  
21 making it a single question. If we did, I think we would have  
22 to say something to the effect, did plaintiffs prove that  
23 Pradaxa proximately caused either Betty Knight's injuries or  
24 her death or both.

25 (Plaintiffs' counsel conferring.)

1 MS. JONES: I think one of those versions would  
2 probably be fine with us, Your Honor.

3 MR. MOSKOW: Our concern is jury confusion because of  
4 the way the case has been tried in terms of the defense really  
5 focusing on her health issues and whether or not this caused  
6 her death as opposed to whether it caused her any additional  
7 injury.

8 And so by separating it out this way, it allows the  
9 jury to clearly indicate which question they're answering and  
10 not get lost in is it and/or, is it because --

11 THE COURT: Okay.

12 MS. JONES: We still think that a single question is  
13 appropriate perhaps with an adjustment that you described.

14 THE COURT: Well, I think I agree with plaintiff. In  
15 this case, I think it might be useful and perhaps necessary  
16 for the jury, to make sure that they all concur on a unanimous  
17 verdict, that they all concur on these causation questions.  
18 So I'm going to include their version of question 7. They  
19 left out a yes or no space for an answer, so that would be  
20 inserted there.

21 MR. MOSKOW: We have a cleaned-up version, Your Honor,  
22 that we can provide.

23 THE COURT: Okay.

24 MR. MOSKOW: We'll e-mail it to Blake.

25 THE COURT: I'm sorry?

1 MR. MOSKOW: We can e-mail it to Blake.

2 THE COURT: Okay. Copy them.

3 All right. And then the next matter is on damages.  
4 As I understand it, plaintiff wants to break them out between  
5 economic, non-economic and wrongful death. The defendant  
6 asked for just a single amount.

7 I think when a party wants to break out elements of  
8 damages, I think they're entitled to. So if that's what  
9 plaintiff wants to do, I'm inclined to include that.

10 MS. JONES: And we object to that, but we understand  
11 your position, Your Honor, just for the record.

12 THE COURT: What's the objection for, then?

13 MS. JONES: Well, ultimately they're being asked what  
14 amount would fairly compensate for her injuries or her death.  
15 I think they can include that amount -- I'm sorry -- can  
16 include that amount based on whatever their decision is on  
17 that topic. But we understand Your Honor's ruling on that.

18 MR. MOSKOW: On our proposed form, Your Honor, there  
19 shouldn't have been a third line for wrongful death because  
20 that is included under item 10. So we'll delete that.

21 THE COURT: Well, that raises another question, and  
22 that is West Virginia law may well treat wrongful death  
23 damages differently in terms of who gets to recover than  
24 Betty's personal injury damages.

25 My recollection is personal injury damages are

1 collected by the -- Gretchen will know this -- by the estate  
2 representative?

3 MS. CALLAS: I think that is correct, Your Honor. I  
4 think any damages would pass to the estate, and then the  
5 distribution would probably be the question. I think --

6 THE COURT: Well, do you think that both personal  
7 injury damages and wrongful death damages pass to the estate?  
8 Or does the statute provide that when there is a personal  
9 injury claim that survives someone's death, the beneficiary of  
10 that claim is just the -- is decided -- it is the  
11 representative of the estate who then can decide who gets the  
12 money?

13 As opposed to wrongful death --

14 MS. CALLAS: Right, which would pass to the -- yeah, I  
15 think you're correct.

16 THE COURT: It goes to the beneficiary.

17 MS. CALLAS: I think you're correct as to where the  
18 money goes. I think the damages may also be somewhat  
19 distinct. That is, the wrongful death --

20 THE COURT: I think they are, too.

21 MS. CALLAS: Yeah, so maybe we need to look at that.

22 MR. MOSKOW: The case is brought individually and as  
23 representatives, so that does raise the issue.

24 THE COURT: Right. So I think you're going to have to  
25 tender something that separates the damages into, first, any



1 damages for her personal injury and the amount thereof;  
2 second, any damages for wrongful death and the amount thereof  
3 or whatever.

4 And if you want to separate that into -- well, there  
5 aren't any -- the economic damages were just medical bills.

6 MR. MOSKOW: Correct. So I think we can do that with  
7 section 10, Your Honor, by -- because question 10 is a  
8 separate question on death, we can just separate it that way,  
9 and that will address the issue.

10 THE COURT: You're saying question 10, and --

11 MR. MOSKOW: In our proposal, we have question 9, what  
12 amount of money would fairly and reasonably compensate for  
13 injuries. And then we would separate the wrongful death into  
14 a separate question 10.

15 THE COURT: All right. So I agree, I think you're  
16 going to have to separate the damage amounts based upon the  
17 two different types of claims here.

18 So you'll prepare the verdict form and share it --

19 MR. MOSKOW: We will before we leave court, Your  
20 Honor.

21 THE COURT: And then the last one goes to the punitive  
22 damages. Defendant wants essentially a second question.

23 MS. JONES: I think we're fine with just the one, Your  
24 Honor.

25 THE COURT: The way the plaintiff tendered it, then?

1 MS. JONES: Yes.

2 THE COURT: All right. We'll do it that way. I think  
3 that is what is proper, too, one question.

4 All right. Does that resolve the verdict form?

5 MR. MOSKOW: It does, Your Honor.

6 THE COURT: Anything else the parties are aware of  
7 that the Court needs to address tonight?

8 MS. JONES: No.

9 THE COURT: All right. Blake is going to finish this  
10 up in a matter of minutes and e-mail final instructions to  
11 you.

12 MS. JONES: Okay.

13 THE COURT: If anything occurs -- I told the jury  
14 9:30. I want counsel here at 9:00. And hopefully if you  
15 think of anything that needs to be addressed, you'll tell the  
16 other side and let me or Blake know as soon as you know that.

17 All right?

18 MR. LEWIS: Will do. Thank you, Your Honor.

19 THE COURT: Thank you.

20 MR. MOSKOW: Your Honor, just so the Court is aware,  
21 and with the Court's indulgence, the parties would agree to an  
22 hour and 15 minutes each side for closing.

23 Is that acceptable to the Court?

24 THE COURT: Fine with me. What I usually do is  
25 require that you cannot save more than half.

1           You know, I think I said this to you in your openings.  
2           I don't like to put lawyers on a stopwatch. So I'll hold you  
3           more or less to your time, but I'll give you a prompt or two  
4           well before I decide you have to be cut off.

5           MR. MOSKOW: Appreciate that, Your Honor.

6           THE COURT: Okay.

7           All right. Thank you. See you in the morning.

8           MR. MOSKOW: Thank you.

9           MR. LEWIS: Thank you, Your Honor.

10           (Proceedings were adjourned at 6:38 p.m.)

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1 CERTIFICATION:

2 We, Kathy L. Swinhart, CSR, and Lisa A. Cook,  
3 RPR-RMR-CRR-FCRR, certify that the foregoing is a correct  
4 transcript from the record of proceedings in the  
5 above-entitled matter as reported on October 16, 2018.  
6  
7

8 October 17, 2018  
9 DATE

10 /s/ Kathy L. Swinhart  
11 KATHY L. SWINHART, CSR

12 /s/ Lisa A. Cook  
13 LISA A. COOK, RPR-RMR-CRR-FCRR  
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